C0. Introduction

C0.1

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

**[Company name] Ono Pharmaceutical Co., Ltd.**

**[Representative] Gyo Sagara, President, Representative Director, and CEO**

**[Headquarters] 8-2, Kyutaromachi 1-chome, Chuo-ku, Osaka, Japan**

**We manufacture and sell pharmaceutical drugs. Our financial summary is as follows.**

| Year and month of settlement | March 2017 | March 2018 | March 2019 |
|---|---|---|---|
| Revenue (unit: one million yen) | 244,797 | 261,836 | 288,634 |
| Operating profit (unit: one million yen) | 72,284 | 60,684 | 62,010 |
| Operating profit margin (%) | 29.5 | 23.2 | 21.5 |
| Profit for the current year (unit: one million yen) | 55,793 | 50284 | 51,539 |
| Total assets (unit: one million yen) | 617,461 | 609,226 | 655,056 |

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 | April 1 2018 | March 31 | No | <Not Applicable> |

C0.3

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

Japan
Republic of Korea
Taiwan, Greater China
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

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

JPY

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.**

Financial control

C1. Governance

C1.1

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

Yes

C1.1a

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

| Position of individual(s) | Please explain |
|---|---|
| Director on board | Since we Ono Pharmaceutical recognize that environmental issues including climate change constitute one of the most important issues affecting our corporate foundation, we assign the responsibility of addressing climate change to the officer who is in charge of corporate foundation and also holds the post of chief sustainability officer (CSO) and appoint this person to be the officer in charge of the environment. This officer serves as the chairperson of the Environmental Management Committee, which is comprised of person in charge of environmental issues at our major production sites and is tasked with reviewing problems related to climate change more than once half-yearly. We share regularly reports on information that committee members have obtained through varieties of sources, such as seminars, among the people concerned. As a result, the officer is well informed of the latest information even during a period over which no meeting of the committee has been held. The officer also serves as a member of our Management Meeting, in addition to being the chairperson of the CSR Committee that manages and integrates overall CSR activities including those involving climate change. The officer tables a review of the Environmental Management Committee's activities at meetings of the CSR Committee and the Management Meeting once half-yearly. The officer reports the results of the reviews carried out by the meeting of these at a Board of Directors once a year to have board members share them. |
| Chief Sustainability Officer (CSO) | Since we Ono Pharmaceutical recognize that environmental issues including climate change constitute one of the most important issues affecting our corporate foundation, we assign the responsibility of addressing climate change to the officer who is responsible for the corporate foundation and also holds the post of CSO, and appoint this person to be the officer in charge of the environment. The CSO also serves as the chairperson of the Environmental Management Committee, which is comprised of person in charge of environmental issues at our major production sites and is tasked with reviewing problems related to climate change more than once half-yearly. We share regularly reports on information that committee members have obtained through a variety of sources, such as seminars, among the people concerned. As a result, the CSO is well informed of the latest information even during a period in which no meeting of the committee is held. The CSO also serves as the chairperson of the CSR Committee that manages and integrates overall CSR activities, including those involving climate change. The CSO is, other than those duties, a member of our Management Meeting. The Officer tables a review of the Environmental Management Committee's activities at meetings of the CSR Committee and the Management Meeting once half-yearly. The Officer also reports the results of the reviews carried out by the meetings of these at a Board of Directors once a year to have board members share them. |

C1.1b

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

| Frequency with which climate-related issues are a scheduled agenda item | Governance mechanisms into which climate-related issues are integrated | Please explain |
|---|---|---|
| Scheduled – all meetings | Reviewing and guiding strategy<br>Reviewing and guiding major plans of action<br>Reviewing and guiding risk management policies<br>Reviewing and guiding annual budgets<br>Overseeing major capital expenditures, acquisitions and divestitures<br>Monitoring and overseeing progress against goals and targets for addressing climate-related issues<br>Other, please specify (Drafting and revision of unified company-wide rules) | The officer in charge of the environment, who also serves as the CSO, chairs our Environmental Management Committee once or more per each half of the fiscal year. At the Environmental Management Committee, risks and opportunities brought about by climate change are assessed, and strategies and courses of action against them are decided based on the assessment. In order to make the course of action more concrete, we set quantitative medium-to-long term targets and monitor the status of target accomplishment. We also review, at the Committee meetings, measures to be implemented such as capital investment and the budgets required to implement the measures. Other than these, we establish company-wide, unified rules for calculating Scopes 1, 2 and 3 emissions for the entire company. The reliability of data is assured by carrying out autonomous checks of them among our production sites. These procedures are reviewed and amended as necessary. The Officer in charge of the environment is responsible, as the chairperson of the Environmental Management Committee, for what has been decided at Committee meetings. The results of activities carried out by the Committee are reported and reviewed in the CSR Committee and the Management Meeting and then reported at a board meeting by the Officer. Through these processes, the Board of Directors oversees the issues involving climate change. During the reporting year, strategies against climate change were reviewed for possible revision at Committee meetings, and decisions were made to establish our company's own vision for the environment and to secure certification for science-based targets (SBT) for it. Based on these decisions, a limited time-frame environmental strategy project was launched within the Environmental Management Committee with the Officer in charge of the environment as its leader in order to establish an environmental vision and medium-to-long term targets, along with an estimation of costs for achieving them. The environmental vision, targets and estimated costs were all approved by the CSR Committee and the Management Meeting, and they were also reported in a meeting of the board of directors. |
| Scheduled – some meetings | Reviewing and guiding strategy<br>Reviewing and guiding major plans of action<br>Reviewing and guiding risk management policies<br>Reviewing and guiding annual budgets<br>Overseeing major capital expenditures, acquisitions and divestitures<br>Monitoring and overseeing progress against goals and targets for addressing climate-related issues | At the Management Meeting, of which our officers are members including the one in charge of environmental issues, the results of initiatives carried out by the Environmental Management Committee are tabled and reviewed, in addition to examination of business plans and targets. The results of these reviews are reported in a meeting of the Board of Directors. Through this process, the Board of Directors oversees our climate change problems. During the reporting year, the environmental vision unique to our company, the medium-to-long term targets and the costs of meeting these targets were reviewed by the Management Meeting after they were drafted by the Environmental Management Committee and approved by the CSR Committee. After obtaining approval from the Management Meeting, they were reported in a meeting of the Board of Directors. |

| Frequency with which climate-related issues are a scheduled agenda item | Governance mechanisms into which climate- related issues are integrated | Please explain |
|---|---|---|
| Scheduled – some meetings | Reviewing and guiding strategy<br>Reviewing and guiding major plans of action<br>Reviewing and guiding risk management policies<br>Reviewing and guiding annual budgets<br>Reviewing and guiding business plans<br>Setting performance objectives<br>Monitoring implementation and performance of objectives<br>Overseeing major capital expenditures, acquisitions and divestitures<br>Monitoring and overseeing progress against goals and targets for addressing climate-related issues | At the CSR Committee that manages CSR initiatives as a whole, the results of initiatives by the Environmental Management Committee are tabled and reviewed. These are also reported in a meeting of the Board of Directors. Through this process, the Board of Directors oversees our climate change problems. During the reporting year, the environmental vision unique to our company, the medium-to-long term targets and the costs of meeting these targets were reviewed by the Management Meeting after they were drafted by the Environmental Management Committee and approved by the CSR Committee. After obtaining approved from the Management Meeting, they were reported in a meeting of the Board of Directors. |

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 Sustainability Officer (CSO) | Both assessing and managing climate-related risks and opportunities | More frequently than quarterly |
| Other committee, please specify (Environmental Management Committee) | Both assessing and managing climate-related risks and opportunities | More frequently than quarterly |
| Other committee, please specify (CSR Committee) | 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 climate-related issues are monitored (do not include the names of individuals).**

Under our corporate philosophy, “Dedicated to Man’s Fight against Disease and Pain,” we recognize that it is very important to strengthen our initiatives toward solving environmental problems, realizing that our aspirations for making society healthier through discovering innovative drugs can only be achieved when our business activities are made possible through a wholesome environment on the earth being preserved. Since our recognition that climate change is especially critical, among environmental problems that can affect our corporate foundation, we assign the responsibility of addressing climate change to the officer who is in charge of corporate foundation and also holds the post of CSO, and appoint this person to be the officer in charge of the environment. The CSO organizes the CSR Committee and brings together and manages its entire activities, and has made the officer the chair person of both committees. This officer engages, as the chair, in assessment and management of the results of initiatives for reducing greenhouse gases as well as their expected risks and afforded opportunities and in setting of targets and progress management of activities implemented to achieve the targets at meeting of the Environmental Management Committee held more than once half-yearly. The officer is also responsible for monitoring and assessing the company-wide initiatives implemented for the purpose. The results are reported and reviewed at CSR Committee meetings, and they are reported at the Management Meeting, which is comprised of our company‘s officers. The results of reviews conducted by the committees and conferences are reported once every year at a meeting of the Board of Directors to have its members share them. Other than these, we share reports, as necessary, on information concerning environmental problems that committee members have obtained by attending a variety of sources such as seminars with Environmental Committee members, including the officer in charge of environmental affairs, even during a period in which no meeting of the committee is held.

During the reporting year, we reviewed our strategies against climate change for possible revisions at the Environmental Management Committee and decided on establishing our environmental vision and obtaining certification for SBT. An environmental vision drafted at the Committee, medium-to-long term targets and the costs estimated for meeting these targets, namely, “50% reduction from Fiscal 2017 of Scopes 1 and 2 emissions in Fiscal 2030,” “30% reduction from Fiscal 2017 of Scope 3 emissions in Fiscal 2030,“ “zero Scopes 1 & 2 emissions by FY2050,” and “60% reduction from Fiscal 2017 of Scope 3 emissions in Fiscal 2050,” have been approved at the Management Meeting. They were also reported at a meeting of the Board of Directors.

C1.3

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

Yes

C1.3a

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

**Who is entitled to benefit from these incentives?**

Director on board

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction project

**Comment**

If the officer charged with the environment along with CSO’s responsibility succeeds in promoting environmental management and in achieving a high-level result, the officer will be rewarded with an increased executive compensation.

**Who is entitled to benefit from these incentives?**

All employees

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction project

**Comment**

If an employee succeeds in reducing greenhouse gas emissions or energy usage drastically or in completing an excellent initiative such as building of a new management system, the person is evaluated favorably in his/her employee performance assessment.

**Who is entitled to benefit from these incentives?**
All employees

**Types of incentives**
Recognition (non-monetary)

**Activity incentivized**
Emissions reduction project

**Comment**
If an employee achieves an excellent job in a company-wide activity such as one that helps improve the Earth's overall environment, the person is commended by the president.

## 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 | We Ono Pharmaceutical consider the three time horizons, short-, medium- and long-term, in accordance with SBT. For our business plan, we have set the long-term vision in 15 years. To achieve a vision, we draft and execute medium-term plans for 5 years. |
| Medium-term | 4 | 10 | We Ono Pharmaceutical consider the three time horizons, short-, medium- and long-term, in accordance with SBT. For our business plan, we have set the long-term vision in 15 years. To achieve a vision, we draft and execute medium-term plans for 5 years. |
| Long-term | 11 | 30 | We Ono Pharmaceutical consider the three time horizons, short-, medium- and long-term, in accordance with SBT. For our business plan, we have set the long-term vision in 15 years. To achieve a vision, we draft and execute medium-term plans for 5 years. |

### C2.2

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

### C2.2a

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

| | Frequency of monitoring | How far into the future are risks considered? | Comment |
|---|---|---|---|
| Row 1 | Six-monthly or more frequently | >6 years | Identification and assessment of climate change risks are carried out at specially called meetings, as well as atperiodic ones held twice a year, of the Environmental Management Committee. These are assessed according to such categories as possible timing and probability of their occurrences, their levels of financial effect, etc. to set priorities among them. As for the management of these risks, we manage them by first drafting varieties of plans such as an autonomous environmental action plan, a business continuity plan (BCP) manual, and a plan for reducing greenhouse gas emissions through medium-to-long-term capital investments, to base our actions on. We implement these plans giving top priorities to those that have a greater reduction effect such as use of an alternative fuel. Implementation results are reported at the Committee. As for CO2 reduction targets, new Scopes 1 to 3 emissions reduction targets that are to be met by FY2030 and by FY2050, have been set during the reporting year, in additions to the ones set previously for Scopes 1 & 2 emissions for FY2020, and their implementation statuses are being monitored by the Committee. The minutes of the meetings of the Committee are circulated among the president and other corporate officers. |

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

**i The way climate-related risks are identified and assessed at our company as a whole:**

Meetings of the Environmental Management Committee are held at a frequency more than once half-yearly, and the identification and assessment of company-wide climate change risks are made with periods up to 6 years and over taken into consideration.
In the determination of a risk, various incidents that may affect our business through climate change are listed, and the magnitude of financial impact each incident would have, the timing of its occurrence, its probability and so on are estimated to assess the risk. If an assessment is judged to require expert knowledge, or if it is judged that a proper assessment cannot be carried out by the Environmental Management Committee alone because the risk's financial impact is too big, the risk is reported in the Division Conference, the Management Meeting, etc. to advance its assessment.

**ii The way individual climate-related risks to corporate assets are identified and assessed:**

Along with the determination of company-wide climate-related risks carried out at the Environmental Management Committee, the effects of incidents caused by climate change for individual production sites are estimated taking into consideration the characteristics of the locale in which each is based. Also, the impact of the site's operation shutdown on our entire business is also estimated. In this assessment of the impact, additional impacting factors such as the magnitude of financial impact, timing of incident occurrence, its probability and so on are also included. If an assessment is judged to require expert knowledge, or if it is judged that a proper assessment cannot be carried out by the Environmental Management Committee alone because the risk's financial impact is too big, the risk is reported in the Division Conference, the Management Meeting, etc. to advance its assessment.

**iii Process implemented to assess potential magnitude and scope of an identified risk:**

The potential magnitude and scope of an identified risk are assessed at the Environmental Management Committee based on its levels of financial impact and occurrence probability as indexes, and priorities among risks are determined accordingly. In implementing a measure against a risk, ones that have high cost effectiveness are given a high priority. If a countermeasure is too costly, it will be tabled at the Management Meeting or the Capital Investment Committee.

**iv Process implemented to determine relative importance of related to other risks:**

Among climate-related risks that have been identified, those that would directly impact production activity, research work, etc. of a segment of our company are deliberated at the respective Division Conference. They are considered relative to corporate risks other than climate change ones, and a final judgment is made in a comprehensive manner.

**v How serious the potential impact to our finances and strategic decisions is defined:**

If the financial impact of a risk exceeds 100 million yen, it is defined as one that would have a serious impact on our finances and strategic decisions, and it is managed accordingly.

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

| | Relevance & inclusion | Please explain |
|---|---|---|
| Current regulation | Relevant, always included | Since our annual energy usage exceeds 1,500 kL in crude oil equivalent, our company is designated a specified business operator under the Act on Rationalizing Energy Use. Furthermore, its 4 business sites are designated with differing designation categories because the annual energy use of each exceeds a certain amount in crude oil equivalent under the Act (Fujiyama Plant & Minase Research Institute each as Type-1 designated business sites because of over 3,000 kL crude oil equivalent energy use; Fukui & Tsukuba Research Institutes,Type-2 with over 1,500 kL use). These specified business operators and business sites are obligated, under the Act, to reduce the respective energy basic unit, on a continual basis, by more than 1% annually on average. Because of this fact, a legal/regulatory risk exists in terms of increased capital investment necessary to meet the energy use reduction obligation. This risk is assessed, under the assessment criteria of whether or not we can comply with the regulation, using the status of our measures for achieving energy reduction in light of the reduction obligation under the Act and future energy use forecasts at meetings of the Environmental Management Committee held at a frequency of more than once half-yearly. The risk brought about by the regulation presently in effect is incorporated in our climate change risk. |
| Emerging regulation | Relevant, always included | If a new regulation is legislated, a risk is created because of possible increased costs in procuring raw materials, manufacturing products, maintaining equipment, logistics and so on. This is especially true for our company because we are in the midst of building up a corporate system that enables cost reductions on a company-wide scale. The risk is assessed, at the Management Meeting held once a month, based on the anticipated total amount of costs and on the forecast of our business performance according to the business plan in place, using the ratio of total expenditure to current sales before changes are made to prepare for the enactment of a new regulation as the assessment criteria. The risk that would be brought about by a new regulation is incorporated in our climate change risk. |
| Technology | Relevant, always included | When introducing a new technology involving low carbon energy, a risk is created where our business activities may come to a stop due to the unexpected effect of the newly introduced technology on the existing system. We have a lot of room for introducing new technologies because the ratio of renewable energy use to total energy use is still as low as around 1%. On the other hand, since the compatibility and the like of a newly introduce technology is largely unknown, the risk of our entire system coming to a stop increases in proportion to the number of newly introduced technologies. This risk is assessed, using the level of the stability of equipment operation as the criteria, based on forecasts of safety of equipment for newly introduced technology and financial impact from lost sales due to halting of the operation of the existing equipment. The risk that might be introduced by a new technology is incorporated in our climate change risk. |
| Legal | Not relevant, explanation provided | Our business is production of only pharmaceutical drugs, and no products that have an impact on climate change are produced. Since the impact of pharmaceutical production itself, as a manufacturing sector, on climate change is relatively small, the Environmental Management Committee has decided that the risk of being involved in litigation is so small that it is negligible. |
| Market | Relevant, always included | A conceivable risk here is possible decline in demand for our products for cancers and diabetes because the frequencies of epidemic diseases such as infections increase as global warming progresses. This in turn leads to another risk where the research and development regime, unique to our company and called a compound-oriented one, and the production plan for the existing products may be impacted. These risks are assessed, at meetings of the Research Division Conference or the Production Division Conference held once a month, using the criteria of whether or not the business plan being drafted at present can be carried out, based on the sales volumes and decreased sales for the existing products due to declined demand for them that can be anticipated when a new drug being researched and developed at present is put on the market. This risk involving market responses is incorporated in our climate change risk. |
| Reputation | Relevant, always included | Our visibility skyrocketed suddenly right after we put on the market a new epoch-making, world's-first antibody drug, Opdivo, that has an anti-PD-1 function, and after we were granted an A-evaluation in CDP Climate Change Report 2018. Because of this, a risk may have been created where our reputation impacts our stock price much stronger than usual. This risk is assessed at the Management Meeting held once a month, using the present stock price as the criteria, based on anticipated increases in ESG investment in the future. The risk involving our reputation is incorporated in our climate change risk. |
| Acute physical | Relevant, sometimes included | Because of a power outage caused by extreme local weather (large-scale typhoon torrential rainfall, tornado, lightening strike), a risk may be created where the sales of our products are greatly impacted if the operation of the Fujiyama Plant, our main production site, is halted. This risk is assessed at the Management Meeting held once a month, using our present sales as the criteria, based on the sales amount per day of the products manufactured at the plant and the amount of products stocked in the logistics center and so on. This physical risk caused by an emergency situation is incorporated in our climate change risk. |
| Chronic physical | Relevant, sometimes included | We keeps animal holding rooms and storage (for research samples, reagents, raw materials, intermediate products and final products) at our major business sites such as the Fujiyama Plant, Joto Plant, Minase Research Institute, Fukui Research Institute and Tsukuba Research Institute. If the average atmospheric temperature keeps rising gradually over a long period of time, and the highest or the lowest temperature at each facility becomes deviated from its design standard temperature, a risk would be created where the control temperature for the animal holding rooms and the storage cannot be maintained, and as a result, the reliability of research data and production may become diminished. This result may lead to the necessity of reproducing products and repeat experiments, impacting sales in both the short-term and the long-term. This risk is assessed at the Environmental Management Committee held more than once half-yearly, using forecast sales stipulated in our current business plan as the criteria, based on an estimate of the impact of temperature change on sales if the control temperatures for the rooms for holding experimental animals and storage become no longer maintainable. This physical risk caused by a chronic situation is incorporated in our climate change risk. |
| Upstream | Relevant, sometimes included | A risk would be created by logistics disrupted by flooding or power outage brought about by extreme local weather conditions (large-scale typhoon, torrential rainfall, tornado and lightening strike). Under this condition, production at the Fujiyama Plant, our main production site, may be halted because its procurement of raw materials is impacted. This risk is assessed at the Management Meeting held once a month, using our present sales as the criteria, based on the sales per day of products manufactured at the plant and so on. In this way, the risk involving logistics in the upstream part is incorporated in our climate change risk. |
| Downstream | Relevant, sometimes included | A risk of decline in sales would result if the logistics for Opdivo, our main product at present, are disrupted by flooding or power outage brought about by extreme local weather (large-scale typhoon, torrential rainfall, tornado and lightening strike). This risk is assessed at the Management Meeting held once a month, using the present sales of the product as the criteria, based on product's sales amount per day and product's stock kept in the logistics center. In this way the risk involving logistics in the downstream part is incorporated in our climate change risk. |

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

Climate-related risks and opportunities are considered at meetings of the Environmental Management Committee held at a frequency more than once half-yearly for time frames of up to 6-years-and-over periods. For each risk and opportunity identified at these meetings, its timing of occurrence, occurrence probability, range of its impact, measure(s) to be taken for it and so on are assessed. Then, priorities among them are decided by the committee in a comprehensive manner. High priorities are given specifically to ones that would greatly impact our business, to those whose probability of occurrence is high and to those for which the cost performance of measures to be taken is high. As for risks for which countermeasure costs are high or opportunities for which maximization costs are high, they are deliberated at the Management Meeting or at the Capital Investment Committee. A decision on whether a particular measure will be taken or not is made in a comprehensive manner with risks other than the climate change risk taken into consideration.

In managing identified risks and opportunities, an autonomous environmental action plan, a BCP manual, a medium-to-long term capital investment plan and so on, which make up a GHG emissions reduction plan, are drafted, and actions are taken based on these. Priorities are given to ones with a high-level of reduction effect such as fuel conversion in putting them into action. The result of a reduction measure is reported at the Environmental Management Committee. As for the CO2 reduction targets, Scopes 1 to 3 emission targets to be met by Fiscal 2030 and by Fiscal 2050 were set during the reporting year, in addition to the existing Scopes 1 & 2 emission targets for Fiscal 2020. The progression status in meeting these targets are monitored by the Environmental Management Committee, and the minutes of its meeting are circulated among the president and other officers.

As an example of management of transition risk, examinations made at the Environmental Management Committee can be mentioned, which were for capital investment amounts required for our business sites in dealing with the regulation risk arising from the obligation to abide by the energy use reductions stipulated in the Act on Rationalizing Energy Use With a capital investment of less than 100 million yen, the Division of which a business site is a member carries out renovation of equipment. With an investment over 100 million yen, renovation is carried out by the Headquarters after obtaining approval from the Capital Investment Committee. A major measure taken during the reporting year is the renewal of chillers carried out at Minase Research Institute. A total of 4 air-cooled chillers used as the heat sources for air conditioning were renewed after obtaining approval from the committee. In this renewal, 329,088 kWh (Scope 2 emission equivalent of 143.15 t-CO2) per year energy saving was achieved.

As an example of management of physical risk, the risk of reduced sales or delayed marketing of a product due to repeated experiments can be mentioned, which would be caused by our inability to assure the reliability of product quality and research data by keeping the control temperatures due to average temperature increase at storage (for research samples, reagents, raw materials, intermediate products and final products) or at rooms for holding experimental animals. To avoid this risk, countermeasures were deliberated and approved at the Environmental Management Committee, and as a result, a cooling measure of spraying water on the cool/hot air production equipment for air conditioning and on the air side of chiller was taken at every business site.

As an example of management of transition opportunity, introduction of Top Runner Program equipment can be mentioned, which was carried out on the occasion of renewing the existing equipment to abide by the energy use reduction obligation stipulated in the Act on Rationalizing Energy Use. Examinations at the Environmental Management Committee resulted in the selection of Top Runner Program equipment whose energy saving performance is excellent in renewing the existing equipment to capitalize on the opportunity of reducing running costs to an optimal degree despite a high initial investment cost after obtaining approval from the Capital Investment Committee.

As an example of management of physical opportunity, examinations of introducing emergency power generators in major business sites and eventual decision on it at the Management Meeting can be mentioned. The decision was taken to avoid the risk of major production site's operation being halted due to a local disaster. It is advantageous to continue production even during a power outage caused by a power company without being affected by it greatly, thereby maintaining an advantageous position over other companies. For this purpose, it was decided, at the Management Meeting, to introduce in the Fujiyama Plant, our main production site, not only emergency power generators, but also regular-use power generators in a cogeneration system in order to lessen the dependency on the power generation company.

C2.3

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

Yes

C2.3a

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

**Identifier**

Risk 1

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

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Policy and legal: Enhanced emissions-reporting obligations

**Type of financial impact**
Write-offs, asset impairment, and early retirement of existing assets due to policy changes

**Company- specific description**
We are designated a specified business operator under the Act on Rationalizing Energy Use. Furthermore because the annual aggregate usage of energy of all of our business sites exceeds 1,500 kL, our 4 business sites are designated with differing designation categories because the annual energy use of each exceeds a certain amount in crude oil equivalent under the Act (Fujiyama Plant & Minase Research Institute each as Type-1 designated business sites because of over 3,000 kL crude oil equivalent energy use; Fukui & Tsukuba Research Institutes,Type-2 with over 1,500 kL use). These specified business operators and business sites are obligated, under the Act, to reduce the respective energy basic unit, on a continual basis, by more than 1% annually on average, and therefore, measures for achieving the target stipulated in an energy use reduction plan must be taken. Because of these requirements, a risk is created where cost increases necessary to introduce equipment and operate them becomes inevitable. We have drafted a medium-to-long term plan for capital investment for advancing renewal of equipment to ones with higher energy saving performance in order to deal with this risk incurred by the amended Act on Rationalizing Energy Use . Other than this measure, we are examining the possibility of introducing solar power generation equipment in our business sites.

**Time horizon**
Medium-term

**Likelihood**
Virtually certain

**Magnitude of impact**
Medium

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

**Potential financial impact figure (currency)**
4000000000

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

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

**Explanation of financial impact figure**
Under the Act on Rationalizing Energy Use, it is obligated to reduce the energy-use basic unit by annual average of 1% over 5 years with the first fiscal year used as the base year. If no reduction measure is taken for 4 years excluding the base year, it is likely that instruction is given by the Ministry of Economy, Trade and Industry. To avoid this situation, capital investment must be made. If energy consuming equipment is renovated to reduce its energy-use basic unit by 1% on average, this effect can be carried over to the next year and beyond. When renovation of equipment is made in the last year to compensate for all the reductions required over the past 4 years, the accumulated energy saving is different from the case where reduction measure has been taken for 4 years. The latter is about 2.5 times larger than the former. This difference between accumulate amounts of energy saving is considered when estimating the financial impact of this measure, and it is assumed that the required renovation measure is taken in the last year for the last 4 years of reductions combined. The formula for the amount in this case: 400 million yen capital investment for energy saving for the reporting year × 4 years × 2.5 correction factor for accumulated energy saving.

**Management method**
Along with carrying out periodic checks of equipment that uses energy, conversion to higher efficiency equipment at the time of renovation is methodically carried out. To mention an example, heat source equipment for air conditioning at a research institute was renewed in the reporting year. At this institute, moisture and temperature of the atmosphere must be kept constant to assure the reliability of research data. It is also necessary to prevent any contamination with foreign materials. Because of these requirements, a fresh air conditioning system is used at the institute without recirculation of air adjusted for moisture and temperature after it is taken in from the outside. Because of this fact, the energy consumption of the system is extraordinarily high. In order to advance any energy saving initiative, it is essential to reduce the energy to be used in air conditioning. Also, it is also a challenge to renew the heat source equipment for air conditioning without stopping air conditioning (i.e. without stopping research activities). To meet these challenges, a heat source equipment renewal plan was drafted first, then renewal of equipment was carried out based on it. As a result, a Scope 2 emissions reduction of 143.15 tons was achieved in one year for the reporting year. The cost of the risk management was the yen amount required to renew the equipment carried out in the reporting year.

**Cost of management**
399000000

**Comment**

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**Identifier**
Risk 2

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

**Risk type**
Physical risk

**Primary climate-related risk driver**
Chronic: Rising mean temperatures

**Type of financial impact**
Write-offs, asset impairment, and early retirement of existing assets due to policy changes

**Write-off and early retirement of assets**
**(e.g., impaired real estate or asset existing in a "high-risk" location)**

**Company- specific description**
If global warming or cooling advances and the highest or the lowest temperature at the research facilities deviates from the respective standard design temperature, it becomes impossible to maintain the control temperature for the animal holding rooms and the storage, diminishing the reliability of research data. This forces us to repeat experiments and other activities. As a result, a risk would be created where the research and development schedule for a product becomes significantly delayed. For instance, in the production of prostaglandins, the product for which we are well known, there is a risk that decomposition of them advances rapidly under high-temperature conditions, damaging the products' quality. Therefore, close attention must be paid to their management and storage.

**Time horizon**
Long-term

**Likelihood**
Unlikely

**Magnitude of impact**
High

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

**Potential financial impact figure (currency)**
9950000000

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

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

**Explanation of financial impact figure**
We estimated that, out of the about 39.8 billion yen of purchases made during the one-year period of the reporting year for intermediate products, final products, materials reagents, raw materials and animals, a quarter of them would have to be repurchased.

**Management method**
As a countermeasure against the risk of the outside temperature exceeding the standard design temperature, we review and evaluate the possibility of introducing, for instance, hot/cool water production equipment for air conditioning and equipment for spraying cooling water to air-side heat exchangers in chillers. With the spraying equipment installed during the reporting year ,when the outside temperature becomes 5 °C higher than the design temperature, we can perform satisfactorily to maintain the temperatures of the holding rooms for experimental animals and storage. The cost of management activity for this measure was calculated from the 40 million yen for cooling water spraying equipment installed during the reporting year and the 1.3 million yen cost of the water used for cooling during the year.

**Cost of management**
41300000
**Comment**

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**Identifier**
Risk 3

**Where in the value chain does the risk driver occur?**
Investment chain

**Risk type**
Transition risk

**Primary climate-related risk driver**
Reputation: Increased stakeholder concern or negative stakeholder feedback

**Type of financial impact**
Reduction in capital availability

**Company- specific description**
We began, in FY2014, the marketing of an immunologic agent, Opdivo, that offers a new functioning mechanism against cancers. And we were granted an A-score in CDP Climate Change Report 2018. Because of these events, our visibility skyrocketed compared to the past. As a result, we may risk declining investment from our investors if they are disappointed with external evaluations of our responses to questions on climate change in such surveys as the CDP Investor Questionnaire and the Nikkei Environmental Management Survey.

**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)**
10800000000

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

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

**Explanation of financial impact figure**
Assuming a stock price of 2,000 yen, 1% equivalent of this price is 20 yen, The current price is calculated as 20 yen multiplied by the weighted average number of shares, 540 million, which is 10.8 billion yen.

**Management method**
We regard the global warming problem as an important challenge to be tackled. That is why we have been investing a great deal of our efforts in CO2 emissions reduction activities and disclosing the activities and their results to the outside world. During the reporting year, we disclosed our environmental initiatives in our corporate report and on our website. In addition, we actively responded to questionnaires, such as the CDP Investor Questionnaire and the Nikkei Environmental Management Survey, which were evaluated by third-party experts. To make our information disclosure more meaningful, we held meetings between our Environmental Management Committee members and external organizations 4 times during the reporting year. Other than these, we held meetings 5 times during the year to talk about how to obtain certification for SBT. The cost of management activities was calculated from the expenses for managing environmental conferences held during the reporting year, personnel costs, fees for reliability assurance, expenses for having environment-related measures implemented by outside organizations, etc.

**Cost of management**
24400000

**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**
Resource efficiency

**Primary climate-related opportunity driver**
Move to more efficient buildings

**Type of financial impact**
Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**
Since our annual energy usage, the total of energy used at all our business sites, exceeds 1,500 kL in crude oil equivalent, our company is designated a specified business operator under the Energy Saving Act. Furthermore, our 4 business sites are designated sites under the Act because the annual energy use of each exceeds a certain amount in crude oil equivalent (Fujiyama Plant & Minase Research Institute each as Type-1 designated business sites because of over 3,000 kL crude oil equivalent energy use; Fukui & Tsukuba Research Institutes,Type-2 with over 1,500 kL use). These specified business operators and business sites are obligated, under the Act, to reduce the respective energy per production volume, on a continual basis, by more than 1% annually on average. As is stipulated in the Act, we have drafted a medium-to-long term plan for replacing energy-consuming equipment with more efficient models. We have to carry out aggressively, on a continual basis, energy-saving activities and introduction of energy-saving equipment to reduce the energy basic units by more than 1% annually on average. On the other hand, this represents an opportunity for us in that we will be able to reduce equipment running costs after introducing the latest energy-saving ones.

**Time horizon**
Short-term

**Likelihood**
Virtually certain

**Magnitude of impact**
Low

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

**Potential financial impact figure (currency)**
9610000

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

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

**Explanation of financial impact figure**
Reduction in yen value of equipment running costs that was realized during the reporting year through replacement of equipment with high-efficiency models.

**Strategy to realize opportunity**
We have a periodic inspection regime in place for energy-utilizing equipment. At the time of replacing equipment, we systematically convert it to higher efficiency models, capitalizing on this moment as an opportunity. As an example, the renewal of the heat source for air conditioning equipment at a research institute during the reporting year can be mentioned. At any one of our research institutes, it is necessary to keep the temperature and humidity of the ambient air within it constant to assure the reliability of research data. For this reason, along with the necessity of preventing contamination through the air, we use all fresh air systems of air conditioning where air intake from the outside is, after being adjusted for temperature and humidity, never circulated until it is discharged. Because of this, the percentage of energy consumption for air conditioning is extraordinarily high. Yet, it is essential to reduce the energy use for air conditioning in order to advance our energy savings. Furthermore, renewing heat source for air conditioning without halting its operation completely (i.e. without halting research activities) is an important consideration. To resolve these problems, we first drafted a plan for replacing the heat source equipment, and we carried out its renewal following this plan. As a result, we succeeded in reducing the electricity charge for operating the heat source at the Minase Research Institute by about 5 million yen. The cost here for realizing the opportunity is the yen value of the cost of replacing the equipment in the reporting year.

**Cost to realize opportunity**
399000000

**Comment**

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**Identifier**
Opp2

**Where in the value chain does the opportunity occur?**
Customer

**Opportunity type**
Products and services

**Primary climate-related opportunity driver**
Other

**Type of financial impact**
Other, please specify (Increased number of patients for whom our drug is beneficial)

**Company-specific description**
When the operation level of appliances in which CFCs are used such as air conditioners is raised to deal with rising highest/lowest atmospheric temperatures, the possibility of CFC leaks is heightened as well. If the ozone layer is destroyed by these chemicals, UV radiation intensifies. If this situation ensues, it is possible that the number of melanoma patients increases due to the effect of intense UV rays. If events unfold this way, we may have an opportunity to increase the sales of our anti-malignant tumor drug, Opdivo, one of our products that possesses an epoch-making, world's-first functioning mechanism.

**Time horizon**
Long-term

**Likelihood**
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)**
45300000

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

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

**Explanation of financial impact figure**
The sales amount of Opdivo was 90.6 billion yen in the reporting year. It is assumed that if the number of melanoma patients ramps up, Opdivo's sales would increase by about 0.05%.

**Strategy to realize opportunity**
Since a medicine is used for approved indications and within approved dosage and administration, our drug cannot be used for melanoma patients for whom the drug's indications do not include their melanoma type. Because of this restriction, we are advancing clinical trials to increase the number of applicable patients and introduction of new remedies. During the reporting year, we secured approval for a new therapy in which the drug is used concomitantly with another. Since this work was part of our regular work, no additional managerial cost was incurred specifically.

**Cost to realize opportunity**
0

**Comment**

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**Identifier**
Opp3

**Where in the value chain does the opportunity occur?**
Investment chain

**Opportunity type**
Resilience

**Primary climate-related opportunity driver**
Other

**Type of financial impact**
Increased market valuation through resilience planning (e.g., infrastructure, land, buildings)

**Company-specific description**
We began the marketing of Opdivo, a cancer immunity drug that has a new function mechanism, in FY2014. Then we were granted an A-evaluation in CDP Climate Change Report 2018. As a result, our visibility was far more heightened than before, and the impact of our initiatives for climate change to our stock price can be expected to become greater than those of others. Other than getting an A-evaluation in CDP Climate Change Report 2018 in the reporting year, our business site based in Osaka Prefecture was awarded with the "Outstanding Performance Award for Halting Osaka's Warming." If our climate change initiatives are commended by a third-party organization in this way, we will have the opportunity of a rising stock price.

**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)**
10800000000

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

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

**Explanation of financial impact figure**
If the impact is 1% equivalent of the stock price, it is 20 yen against our stocks priced at 2,000 yen/share. The total current figure, 10.8 billion yen, is derived by multiplying the impact figure by the weighted average number of shares which stood at 540 million.

**Strategy to realize opportunity**
We regard the global warming problem as an important challenge to be tackled. That is why we have been investing a great deal of our efforts in CO2 emissions reduction activities. Our activities and their results are disclosed to the outside world. During the reporting year, we disclosed our environmental initiatives in our corporate report and on our website. In addition, we actively responded to questionnaires, such as the CDP Investor Questionnaire and the Nikkei Environmental Management Survey, which were evaluated by third-party experts. To make our information disclosure more meaningful, we held meetings between our Environmental Management Committee members and external organizations 4 times during the reporting year. Other than these, we held meetings 5 times during the year to talk about how to obtain certification for SBT. The cost of management activities was calculated from the expenses for managing environmental conferences held during the reporting year, personnel costs, fees for reliability assurance, expenses for having environment-related measures implemented by outside organizations, etc.

**Cost to realize opportunity**
24400000

**Comment**

## C2.5

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

| | Impact | Description |
|---|---|---|
| Products and services | Not yet impacted | If the operation rate of equipment such as air conditioners in which CFCs are used increases due to changing highest and lowest atmospheric temperatures, the risk of specified CFCs known to destroy the ozone layer leaking out from equipment increases. If UV radiation to the Earth's surface increases after such destruction, it is conceivable that the number of melanoma patients increases under the influence of strong UV rays. If this eventuality ensues, this would be an opportunity for us because the sales of one of our products, the anti-malignant tumor drug named Opdivo, may increase. We are currently gathering information on this issue, but no increasing trend has been detected for the number of melanoma patients. When this eventuality is considered over a longer span into the future, say 20 years or so, however, it can be estimated that the number of melanoma patients is likely to increase 5 to 10 fold in 20 years compared to that in the reporting year. In this case, the drug's sales are estimated to increase to 15 to 30 billion yen annually (currently 3 billion yen). |
| Supply chain and/or value chain | Impacted | If a new regulation on climate change is introduced, the supplier of a raw material to be regulated has to take some measure in response. In this case, a risk is created where the raw material procurement cost may rise. We implement a company-wide cost structure reform to restrict the impact of such cost increase. During the reporting year, we learned methods of suppressing procurement costs by encouraging competition among multiple suppliers and taking advantages of economies of scale of bulk purchases, and built up the systems for such methods. Through the reform of company's cost structure, we realized about 2.5 billion yen in cost savings on purchases from our supply chain. |
| Adaptation and mitigation activities | Impacted | To mitigate global warming, and to comply with the CO2 emissions reduction obligation by the Act on Rationalizing Energy Use, we make capital investments. The capital investment we made during the reporting year was 399 million yen. On the other hand, we achieved a 9.61 million yen running cost saving annually by replacing existing equipment with higher efficiency models during the year. |
| Investment in R&D | Not yet impacted | If a new epidemic disease replaces the current prevailing ones due to climate change, whether we can put a breakthrough drug for the new epidemic on the market will impact greatly our sales. We have been collecting information about epidemic diseases, but no change that may impact our research and development has been confirmed. Judging from the sales of the existing products, we can expect more than 200 billion yen in sales annually if we can put a breakthrough drug on the market. However, it takes about 20 years on average to transition from the creation stage to the marketing stage of a drug. Therefore, we have to get hold of critical information as soon as possible and begin the process of creating a new drug. To achieve this, we have to invest about 30 billion yen (general amount required for research and development of a new drug) as research and development expense. |
| Operations | Impacted for some suppliers, facilities, or product lines | The risk of a blackout incident is increasing because the probability of a sudden disaster caused by abnormal weather is rising under climate change. To prepare for this risk, we introduced regular-use power generators in the Fujiyama Plant, our main production site, to lessen our dependency on the current power utility. For the operation of these power generators, we are incurring a fuel cost of about 135 million yen annually. |
| 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 | If a new epidemic disease replaces the current prevailing ones due to climate change, whether we can put a breakthrough drug for the new epidemic on the market will impact greatly our sales. We have been collecting information about epidemic diseases, but no change that may impact our research and development has been confirmed. Judging from the sales of the existing products, we can expect more than 200 billion yen sales annually if we can put a breakthrough drug on the market. However, it takes about 20 years on average to transition from the creation stage to the marketing stage of a drug. Therefore, we have to get hold of critical information as soon as possible and begin the process of creating a new drug. |
| Operating costs | Impacted | To ameliorate global warming, and to comply with the CO2 emissions reduction obligation the Act on Rationalizing Energy Use, we make capital investments. For instance, we achieved a 9.61 million yen running cost saving annually by replacing existing equipment with higher efficiency models during the year. |
| Capital expenditures / capital allocation | Impacted | To ameliorate global warming, and to comply with the CO2 emissions reduction obligation the Act on Rationalizing Energy Use, we make capital investments. The capital investment we made during the reporting year was 399 million yen. |
| Acquisitions and divestments | Not impacted | We are not interested in acquisition or divestment of business as corporate policies. We have no plans for either. |
| Access to capital | Not yet impacted | Since ESG investing is increasingly attracting investors' attention, we put a great deal of effort into initiatives for combating climate change problems. Although we are making the content of our initiatives and their results public in an expeditious manner, we are yet to recognize, at present, any investment made as a result of appreciation of our initiatives for climate change problems. If we continue to advance our initiatives and make their results public expeditiously, we estimate that our stock price will rise by 1% from the present price 2 years from now. If this is the case, we will be able to procure about 10.8 billion yen in funds. |
| Assets | Impacted | To ameliorate global warming, and to comply with the CO2 emissions reduction obligation the Act on Rationalizing Energy Use, we make capital investments. During the reporting year, the assets contributing to amelioration of global warming increased by 399 million yen as a result of the new capital investment. |
| Liabilities | Not impacted | We have no businesses that are liable for compensation in the event of climate change. Also, we do not procure funds from the outside for the purpose of capital investment as a corporate policy. We do not have any plan to do so either. |
| Other | Please select | |

## C3. Business Strategy

C3.1

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

Yes

C3.1a

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

Yes, qualitative

C3.1c

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

**i How our business objectives and strategies have been impacted by climate-related problems:**

The impacts of global warming including abnormal weather are getting bigger every year, and activities against global warming have become an important challenge for the international community. Other than this heightening of people's concerns about their communities, we can expect skyrocketing prices hikes for raw materials and new regulations imposed on them due to climate change. We, as people working in the pharmaceutical industry, note the following two points specifically as challenges imposed by climate change: (1) As disasters are created, supply of our products may be halted. The importance of maintaining stable supply of medicinal products must be stressed more strenuously than for other industries because the soundness of the pharmaceutical industry directly influences people's lives and (2) Although demand for medicinal products is anticipated to change as the type of prevalent diseases also change as a result of rising average temperatures, it is impossible for the industry to respond to this type of sudden change so well because it takes about a period of about 20 years to create a new medicinal product. Other than these consequences, we at Ono Pharmaceutical, whose corporate philosophy is "Dedicated to Man's Fight against Disease and Pain," think that it is important for society to reaffirm the premise of its very existence, namely, a society where people can lead healthy, sound lives is possible only if the Earth's environment is kept wholesome. We recognize that climate change is a serious issue that impacts our foundation. We make it our corporate strategy to be a leading company for environmental challenge in the pharmaceutical industry and tackle aggressively the challenge of reducing GHG emissions in order to resolve climate change problems.

**ii How our business strategy is linked to emissions reduction targets and energy consumption:**

We set, during the reporting year, our reduction targets for Scopes 1, 2 and 3 emissions as follows: "50% reduction of Scopes 1 and 2 emissions compared to FY2017," "30% reduction of Scope 3 emissions by FY2030 compared to FY2017" "Zero Scopes 1 and 2 emissions by FY2050," "60% reduction of Scope 3 emissions by FY2050 compared to FY2017." We have been granted approval from the SBT Initiative and are promoting our own initiatives for achieving the targets. However, the plants and the research institutes where about 90% of our energy is consumed have to observe standards on the production of drugs and research related to it, which are stipulated in ministerial ordinances such as good manufacturing practice (GMP), standards for production and quality management of drugs and quasi-drugs and good laboratory practice (GLP), standards for assuring that inspections and testing for evaluating the safety of drugs and food are carried out accurately and properly. We cannot change the content of these activities that are consuming huge amounts of energy. Therefore, We have decided, for reduction of Scopes 1 and 2 emissions, to implement our energy-saving initiatives methodically, mainly by introducing Top Runner Program equipment when replacing aging equipment and designing buildings with high energy-saving performance when constructing a new business site. In addition to this type of capital investment, we examined the possibility of purchasing renewable energy and purchasing Green Energy Certificates and put these into practice. The investments in these measures are reviewed and approved by the Management Meeting and the like. In the ways described above, our initiatives for dealing with climate change affect our strategies and targets.

**iii Most important business decision made during the reporting year concerning the impact of climate change on corporate strategy:**

During the reporting year, we newly set our environmental vision and emissions reduction targets over the medium-to-long term, which was approved by the SBT Initiative. The Management Meeting approved, in its meeting held in February 2019, reserving 1% or so of pre-tax net profit for the current term continuously in the future as the expenditure for resolution of climate change problems in order to meet the targets.

**iv Which aspect of climate change impacted our corporate strategy:**

As the crisis of climate change problems deepens, varieties of dangers such as food shortage, increased new epidemics, destruction of bases for living due to enormous natural disaster and so on are anticipated to be created, threatening people's healthy and wholesome lives. We cannot allow such threats as people working under the corporate philosophy "Dedicated to Man's Fight against Disease and Pain." That is why we decided to tackle climate change problems aggressively and incorporate the goal, "to be a leading company for environmental challenge in the pharmaceutical industry," in our corporate strategy.

**v How our short-term strategy is impacted:**

The risk of blackout occurrences is increasing due to heightened probability of sudden disasters caused by climate change. As a pharmaceutical company, maintenance of stable supply of medicinal products is most important. This is the reason why we introduced regular-use power generators in the Fujiyama Plant to lessen our dependency on the electric utility.

**vi How our long-term strategy is impacted:**

We set our own environmental vision and medium-to-long term targets, which were approved by the SBT Initiative, during the reporting year, intending to be a leading company for environmental challenge in the pharmaceutical industry. Also, we compiled a road map for meeting the targets, the estimated cost for meeting the set targets, reviewed the reduction plans for the future and gained approval for these at the Management Meeting.

**vii How strategic advantages over competitions are secured:**

The risk of blackout occurrences is increasing due to heightened probability of sudden disasters caused by climate change. We think we have gained a strategic advantage over others in such an eventuality by introducing regular-use power generators in our main production site, the Fujiyama Plant, enabling us to lessen our dependency on the electric utility. At the Yamaguchi Plant where its operation began during the reporting year, a high-level of energy saving design was adopted, making it possible to preserve cleanliness not only for entire rooms, but also for more limited areas. Thanks to this feature, the production cost can be reduced more than at conventional type production sites of other companies.

**viii How the Paris Agreement impacted our business strategy:**

The Agreement made us realize the importance of climate change problems all the more. Even after the Agreement was concluded, the average temperatures are increasing all over the world. Therefore, we came to conclude that the emissions reduction activities we set when the Agreement was concluded will be insufficient in order to realize the medium-to-long term target stipulated in the Agreement. That is why we set an ambitious environmental vision and targets of our own that satisfy SBT standards during the reporting year.

C3.1d

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

| Climate-related scenarios | Details |
|---|---|
| RCP 8.5 | · Reason for selecting the scenario – Among the RCP scenarios described in the Fifth IPCC Report, most popularly referenced in various seminars hosted by the Ministry of the Environment and others, the RCP 8.5 scenario was selected that assumes maximum emissions while no countermeasures against global warming are taken due to the fact that world's GHG emissions have kept on increasing recently and that measures must be examined assuming the worst-case scenario<br><br>· Inputs, assumptions and analysis methods used – Phenomena that are assumed to be caused by temperature increases (changing diseases, etc.), population changes the world over and their breakdown, technologies expected to be realized, declining birthrate and aging population, changing economic system due to growth of developing countries were assumed as inputs, and the portion that could be analyzed quantitatively are separated from other portions that could be analyzed only qualitatively. Analyses in these portions were considered in combination.<br><br>· Considered regions, periods and fields – Business establishments in Japan, whose Scopes 1 to 3 emissions comprise over 90% of the entire emissions, were considered. We set up short, medium and long term periods based on SBT. Only the medium term (3 to 10 years) and the long term (10 to 30 years) periods were considered. Because the short term (0 to 3 years) period was already incorporated in the management strategy, it was excluded from the analysis. Production of medicinal products is the only business for us. Soaring of raw material prices and fluctuations of stock prices by reputation can happen in other industries as well. Therefore, the elements in this business that are impacted most by climate change were considered to be the following two. As the first point, the halting of supply of products due to a disaster can be mentioned because stable supply of products, i.e. drugs, is more important than in other industries as we at pharmaceutical companies engage in a business that directly affect people's lives. The second point is possible changes in demand for drugs due to changing diseases.<br><br>· Results of analyses of scenario – The medium-term analysis result indicated that the halting of operation of business sites and interrupted logistics due to increasing natural disasters amount to a sales decrease of 11.6 billion yen. Since it takes about 20 years to create a new drug, the only positive impact in terms of sales increase turned out to be attributable to the existing product, Opdivo (for malignant black tumor), whose expected sales increase per year amounts to as little as 45 million yen. In the long term, while sales decrease due to halting of operation of business sites and interrupted logistics caused by increasing natural disasters could be in the range of between 11.6 to 33.2 billion yen annually, a 3.6 to 7.6 billion yen annual expenditure increase could be anticipated due to soaring raw material prices. This could happen when the sales of existing drugs such as Optivo can be anticipated to be relatively small due to expiration of their patent rights, contributing little to the overall sales figure.. As a positive factor, we assumed that new groundbreaking drugs would be put on the market. Under this assumption, it turned out that a sales increase of 40 to 200 billion yen could be expected annually. It is also assumed that, though not quantitatively proved yet, deaths caused by climate change would significantly increase during both medium and long term periods. Although these analysis results assume the worst scenario, climate change problems turned out to be more disadvantageous than advantageous for us.<br><br>· Impacts on strategy and examples – As a result of the quantitative analysis, negative factors turned out to be dominant in the medium term. In the long term, there were cases where negative factors were dominant, but in other cases, positive factors were dominant. As a result of qualitative analysis, the number of deaths due to climate change problems turned out to increase. Based on these analysis results and our corporate philosophy, "Dedicated to Man's Fight against Disease and Pain," we examined our course of action in a project called Environmental Strategy Project, established within the Environmental Management Committee over a limited time, whose leader was the CSO, also serving as the officer in charge of environmental affairs. As a result, we decided that we would tackle climate change problems more aggressively than before to be a leading company for environmental challenge in the pharmaceutical industry. We intend to take leadership in this way to reduce GHG emissions from us, our suppliers and the like and restrain temperature increases. This was the decision we took in the reporting year. Following this decision, our environmental vision and ambitious targets demanded by the standards of SBT were set within the Environmental Strategy Project. Then, cost estimates were made for achieving them, and future emissions reduction plans were reviewed. After going through these processes, the results were approved by the Management Meeting. |

## C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

**Target reference number**
Abs 1

**Scope**
Scope 1+2 (location-based)

**% emissions in Scope**
80

**Targeted % reduction from base year**
23

**Base year**
2005

**Start year**
2006

**Base year emissions covered by target (metric tons CO2e)**
26653.41

**Target year**
2020

**Is this a science-based target?**
No, but we are reporting another target that is science-based

**% of target achieved**
75.55

**Target status**
Underway

**Please explain**
This fiscal year's emissions were calculated with the stipulated factor, following the reduction target of the Federation of Pharmaceutical Manufacturers' Associations of Japan and based on the formula used at the Association. Incidentally, the entities included in the calculation are our domestic plants and research institutes. Therefore, the percentage of inclusion is less than 100%.

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**Target reference number**
Abs 2

**Scope**
Scope 1 +2 (market-based)

**% emissions in Scope**
100

**Targeted % reduction from base year**
50

**Base year**
2017

**Start year**
2018

**Base year emissions covered by target (metric tons CO2e)**
30313.2

**Target year**
2030

**Is this a science-based target?**
Yes, this target has been approved as science-based by the Science-Based Targets initiative

**% of target achieved**
21.35

**Target status**
New

**Please explain**
The targets have been set for the entire company, including the head office, branches, plants, and research institutes.

---

**Target reference number**
Abs 3

**Scope**
Scope 1 +2 (market-based)

**% emissions in Scope**
100

**Targeted % reduction from base year**
100

**Base year**
2017

**Start year**
2018

**Base year emissions covered by target (metric tons CO2e)**
30313.2

**Target year**
2050

**Is this a science-based target?**
Yes, this target has been approved as science-based by the Science-Based Targets initiative

**% of target achieved**
10.67

**Target status**
New

**Please explain**
The targets have been set for the entire company, including the head office, branches, plants, and research institutes.

---

**Target reference number**
Abs 4

**Scope**
Scope 3 (upstream & downstream)

**% emissions in Scope**
100

**Targeted % reduction from base year**
30

**Base year**
2017

**Start year**
2018

**Base year emissions covered by target (metric tons CO2e)**
73002.84

**Target year**
2030

**Is this a science-based target?**
Yes, this target has been approved as science-based by the Science-Based Targets initiative

**% of target achieved**
0

**Target status**
New

**Please explain**
The targets have been set for the entire company, including the head office, branches, plants, and research institutes.

---

**Target reference number**
Abs 5

**Scope**

Scope 3 (upstream & downstream)

**% emissions in Scope**
100

**Targeted % reduction from base year**
60

**Base year**
2017

**Start year**
2018

**Base year emissions covered by target (metric tons CO2e)**
73002.84

**Target year**
2050

**Is this a science-based target?**
Yes, this target has been approved as science-based by the Science-Based Targets initiative

**% of target achieved**
0

**Target status**
New

**Please explain**
The targets have been set for the entire company, including the head office, branches, plants, and research institutes.

C4.2

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

C4.3

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

C4.3a

**(C4.3a) Identify the total number of 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 | 5 | 0 |
| To be implemented* | 11 | 245.14 |
| Implementation commenced* | 0 | 0 |
| Implemented* | 10 | 1659.39 |
| Not to be implemented | 0 | 0 |

C4.3b

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

**Initiative type**
Energy efficiency: Building services

**Description of initiative**
HVAC

**Estimated annual CO2e savings (metric tonnes CO2e)**
101.05

**Scope**
Scope 2 (market-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
3474843

**Investment required (unit currency – as specified in C0.4)**
111195000

**Payback period**
>25 years

**Estimated lifetime of the initiative**
11-15 years

**Comment**

---

**Initiative type**
Energy efficiency: Building services

**Description of initiative**
HVAC

**Estimated annual CO2e savings (metric tonnes CO2e)**
143.15

**Scope**
Scope 2 (market-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
4782608

**Investment required (unit currency – as specified in C0.4)**
220000000

**Payback period**
>25 years

**Estimated lifetime of the initiative**
11-15 years

**Comment**

---

**Initiative type**
Energy efficiency: Building services

**Description of initiative**
Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**
8.28

**Scope**
Scope 2 (market-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
282800

**Investment required (unit currency – as specified in C0.4)**
1414000

**Payback period**
4 - 10 years

**Estimated lifetime of the initiative**
11-15 years

**Comment**

---

**Initiative type**
Energy efficiency: Building services

**Description of initiative**
HVAC

**Estimated annual CO2e savings (metric tonnes CO2e)**
15.09

**Scope**
Scope 2 (market-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
516129

**Investment required (unit currency – as specified in C0.4)**
48000000

**Payback period**
>25 years

**Estimated lifetime of the initiative**
11-15 years

**Comment**

---

**Initiative type**
Energy efficiency: Building services

**Description of initiative**
Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**
3.71

**Scope**
Scope 2 (market-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
182000

**Investment required (unit currency – as specified in C0.4)**
910000

**Payback period**
4 - 10 years

**Estimated lifetime of the initiative**
11-15 years

**Comment**

---

**Initiative type**
Energy efficiency: Building services

**Description of initiative**
Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**
6.91

**Scope**
Scope 2 (market-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
291666

**Investment required (unit currency – as specified in C0.4)**
7000000

**Payback period**
21-25 years

**Estimated lifetime of the initiative**
11-15 years

**Comment**

---

**Initiative type**
Energy efficiency: Building services

**Description of initiative**
Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**
0.88

**Scope**
Scope 2 (market-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
44951

**Investment required (unit currency – as specified in C0.4)**
10000000

**Payback period**
>25 years

**Estimated lifetime of the initiative**
11-15 years

**Comment**

---

**Initiative type**
Energy efficiency: Building services

**Description of initiative**
Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**

0.85

**Scope**
Scope 2 (market-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
22500

**Investment required (unit currency – as specified in C0.4)**
180000

**Payback period**
4 - 10 years

**Estimated lifetime of the initiative**
11-15 years

**Comment**

---

**Initiative type**
Energy efficiency: Processes

**Description of initiative**
Process optimization

**Estimated annual CO2e savings (metric tonnes CO2e)**
1.97

**Scope**
Scope 1

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
98169

**Investment required (unit currency – as specified in C0.4)**
0

**Payback period**
No payback

**Estimated lifetime of the initiative**
Please select

**Comment**

---

**Initiative type**
Low-carbon energy purchase

**Description of initiative**
Biomass

**Estimated annual CO2e savings (metric tonnes CO2e)**
1377.5

**Scope**
Scope 2 (market-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
0

**Investment required (unit currency – as specified in C0.4)**
6045000

**Payback period**
No payback

**Estimated lifetime of the initiative**
Please select

**Comment**

C4.3c

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

| Method | Comment |
|---|---|
| Compliance with regulatory requirements/standards | After reviewing the issue at the Environmental Management Committee, the decision on whether or not investment in a particular measure is to be made is carried out at the Management Meeting. Top priorities are given to measures for complying with relevant regulations and standards. Then, ones that are deemed highly important in terms of evaluated risk or opportunity and ones with a great emissions amount whose cost performance is high are implemented. |

C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**
No

C5. Emissions methodology

C5.1

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

**Base year start**
April 1 2017

**Base year end**
March 31 2018

**Base year emissions (metric tons CO2e)**
8488.07

**Comment**

**Scope 2 (location-based)**

**Base year start**
April 1 2017

**Base year end**
March 31 2018

**Base year emissions (metric tons CO2e)**
17793.22

**Comment**

**Scope 2 (market-based) Base**

**year start**
April 1 2017

**Base year end**
March 31 2018

**Base year emissions (metric tons CO2e)**
21825.13

**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)**
8990.68

**Start date**
April 1 2018

**End date**
March 31 2019

**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

---

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

**Reporting year**

**Scope 2, location-based**
18590.3

**Scope 2, market-based (if applicable)**
19650.19

**Start date**
April 1 2018

**End date**
March 31 2019

**Comment**

C6.4

---

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

C6.4a

---

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

**Source**

Leaks from equipment containing CFCs

**Relevance of Scope 1 emissions from this source**

Emissions are not relevant

**Relevance of location-based Scope 2 emissions from this source**

No emissions excluded

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

No emissions excluded

**Explain why this source is excluded**

The amount of emissions of this source for this fiscal year is 494.56t-CO2, which is 1.79% of the total of Scopes 1 & 2 emissions. The effect of this amount on the overall picture can be considered to be low. Therefore, it is excluded.

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**

6377.61

**Emissions calculation methodology**

Suppliers that represent 80% of our purchases of intermediate products, final products, raw materials, materials, reagents or experimental animals (main suppliers) are considered. A value is calculated for each main supplier: its total CO2 emissions multiplied by the ratio of its total sales to us. This value is summed over all the main suppliers. The CO2 emissions are calculated as the 100% equivalent of this sum.

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

100

**Explanation**

**Capital goods**

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

60423.33

**Emissions calculation methodology**

Emissions are calculated by multiplying an emission factor by the price of a capital goods (for augmentation and maintenance of equipment and investments) that is considered a fixed asset in financial accounting. This factor is referenced from Section No.06-0260 "Medicines," Chapter 6 "Emission Basic Units of Capital Goods (Secretariat)" of the Emission Basic Unit Database for Calculating Entity's GHG Emissions, etc. incorporating its Supply Chain (ver. 2.6).

**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
1548.2

#### Emissions calculation methodology
Emissions are calculated by multiplying an emission factor by power usage. The amount of oil used as a fuel is not included in the calculation, since no or very little oil is used as fuel at our business sites. Gas is not included because no factor is defined for it. The factor for electric power is referenced from Section Energy Types “Electricity,” Chapter 7 “Emission Basic Units Per Units of Electricity and Heat Usage (Secretariat)” of the Emission Basic Unit Database for Calculating Entity’s GHG Emissions, etc. incorporating its Supply Chain (ver. 2.6).

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

#### Explanation

### Upstream transportation and distribution Evaluation

#### status
Relevant, calculated

#### Metric tonnes CO2e
105.51

#### Emissions calculation methodology
The factor is referenced from Section “Light Oil” in Chapter 2 “Emission factors Related to Transport in (1) Fuel Act and (2) Fuel Efficiency Act for Reporting and Publicizing System of Global Warming Countermeasure Promotion Act” of the Emission Basic Unit Database for Calculating Entity’s GHG Emissions, etc. incorporating its Supply Chain (ver. 2.6) made public by the Ministry of the Environment.

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

#### Explanation

### Waste generated in operations

#### Evaluation status
Relevant, calculated

#### Metric tonnes CO2e
266.75

#### Emissions calculation methodology
Emissions are calculated by multiplying an emission factor with the weight of general industrial wastes or those from business activities (those itemized on a manifest or weighing record slip). The factor is referenced from Section “Including Transport Stage of Wastes,” Chapter 9 “Emission Basic Units by Waste Type (Secretariat)” of the Emission Basic Unit Database for Calculating Entity’s GHG Emissions, etc. incorporating its Supply Chain (ver. 2.6) made public by the Ministry of the Environment.

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

#### Explanation Business

### travel Evaluation

#### status
Relevant, calculated

#### Metric tonnes CO2e
2340.43

#### Emissions calculation methodology
Emissions are calculated by multiplying an emission factor with employee expenses for transport during business trip. The factor is referenced from Chapter 11 “Emission Basic Unit per Transport Expense Paid Out to Employee (Secretariat)” of the Emission Basic Unit Database for Calculating Entity’s GHG Emissions, etc. incorporating its Supply Chain (ver. 2.6) made public by the Ministry of the Environment.

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

#### Explanation

### Employee commuting

#### Evaluation status
Relevant, calculated

#### Metric tonnes CO2e
377.66

#### Emissions calculation methodology
The factor is referenced from Chapter 11 “Emission Basic Unit per Transport Expense Paid Out to Employee (Secretariat)” of the Emission Basic Unit Database for Calculating Entity’s GHG Emissions, etc. incorporating its Supply Chain (ver. 2.6) made public by the Ministry of the Environment.

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

#### Explanation

### Upstream leased assets

#### Evaluation status
Relevant, calculated

#### Metric tonnes CO2e
3305.97

#### Emissions calculation methodology
Emissions are calculated by multiplying an emission factor by the fuel amount used in leased vehicles for marketing. The factor is referenced from Section “Gasoline,” Chapter 2 “Emission factors Related to Transport in (1) Fuel Act for Reporting and Publicizing System of Global Warming Countermeasure Promotion Act” of the Emission Basic Unit Database for Calculating Entity’s GHG Emissions, etc. incorporating its Supply Chain (ver. 2.6) made public by the Ministry of the Environment.

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

#### Explanation

### Downstream transportation and distribution

#### Evaluation status
Relevant, calculated

#### Metric tonnes CO2e
5354.34

#### Emissions calculation methodology
Formula: CO2 emissions for entirety of main wholesale medicinal products (t-CO2) × Corporate sales (100 million yen) ÷ Sales for entirety of main wholesale medicinal products (100 million yen)

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

#### Explanation

### 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
Since we sell only completed products, no further processing of sold products is carried out.

### 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
What we sell is medicinal products. One basic property of these products is that they do not emit GHG through their use.

### End of life treatment of sold products

#### Evaluation status
Relevant, calculated

#### Metric tonnes CO2e
145.32

#### Emissions calculation methodology
Emissions are calculated by multiplying an emission factor by the weight of the type of packaging materials for our products. Since tablet or capsule products are orally taken by users, only packaging materials are considered for these. The factor is referenced from Section “Including Transport Stage of Waste,” Chapter 9 “Emission Basic Units by Waste type (Secretariat)” of the Emission Basic Unit Database for Calculating Entity’s GHG Emissions, etc. incorporating its Supply Chain (ver. 2.6) made public by the Ministry of the Environment.

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

#### Explanation

### Downstream leased assets

#### Evaluation status
Relevant, calculated

#### Metric tonnes CO2e
302.5

#### Emissions calculation methodology
The factor is referenced from Section “General Electric Utility – Kansai Electric Power,” Chapter 16 “Emission basic unit per unit area by building type (Secretariat)” of the Emission Basic Unit Database for Calculating Entity’s GHG Emissions, etc. incorporating its Supply Chain (ver. 2.6) made public by the Ministry of the Environment.

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

#### Explanation

### 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
We do not engage in the management of franchisees.

### 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
We do not make an investment with large amount of GHG emissions affect the total amount of Scope 3 emissions.

### 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>

#### Explanation

### 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

## C6.7

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

## C6.10

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

**Intensity figure**
9.92e-8

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**
28640.87

**Metric denominator**
unit total revenue

**Metric denominator: Unit total**
288634000000

**Scope 2 figure used**
Market-based

**% change from previous year**
14.29

**Direction of change**
Decreased

**Reason for change**
A reduction of 5.52% could be achieved through emissions-reducing measures including renewal of chillers to high-efficiency heat pump type ones and utilization of Green Energy Certificates. Furthermore, thanks to an increase in sales, by 10.23%, from the previous year, the emission basic unit decreased by 14.29%.

---

**Intensity figure**
0.005176

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**
28640.87

**Metric denominator**
unit of production

**Metric denominator: Unit total**
5532961

**Scope 2 figure used**
Market-based

**% change from previous year**
8.12

**Direction of change**
Decreased

**Reason for change**
A reduction of 5.52% could be achieved through emissions-reducing measures including renewal of chillers to high-efficiency heat pump type ones and utilization of Green Energy Certificates. Furthermore, thanks to an increase in box production, by 2.83%, from the previous year, the emission basic unit decreased by 8.12%.

---

## C7. Emissions breakdowns

### C7.1

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

C7.2

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

| Country/Region | Scope 1 emissions (metric tons CO2e) |
|---|---|
| Japan | 8990.68 |
| United States of America | 0 |
| United Kingdom of Great Britain and Northern Ireland | 0 |
| Taiwan, Greater China | 0 |
| Republic of Korea | 0 |

C7.3

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

By facility

C7.3b

**(C7.3b) Break down your total gross global Scope 1 emissions by business facility.**

| Facility | Scope 1 emissions (metric tons CO2e) | Latitude | Longitude |
|---|---|---|---|
| Minase Research Institute | 132.45 | 34.88413 | 135.661531 |
| Fukui Research Institute | 835.85 | 36.195293 | 136.135237 |
| Tsukuba Research Institute | 687.79 | 36.16422 | 140.054523 |
| Fujiyama Plant | 6755.21 | 35.264972 | 138.612003 |
| Joto Plant | 172.79 | 34.676657 | 135.555064 |
| Aomori Sales Office | 5.92 | 40.823202 | 140.74119 |
| Omiya Sales Office | 10.32 | 35.905882 | 139.618699 |
| Mito Satellite Office | 3.95 | 36.378954 | 140.462299 |
| Kansai Hokuriku Branch Office | 0.35 | 34.688713 | 135.506232 |
| Yagi Building | 4.35 | 34.680536 | 135.506173 |
| Yamaguchi Plant | 352.2 | 34.037909 | 131.316272 |
| Hokkaido Sales Office | 9.21 | 43.057333 | 141.392891 |
| Yamagata Sales Office | 6.61 | 38.24697 | 140.330809 |
| Kawagoe Sales Office | 0.68 | 35.908644 | 139.48034 |
| Niigata Sales Office | 13 | 37.92129 | 139.050047 |

C7.5

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

| Country/Region | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) | Purchased and consumed electricity, heat, steam or cooling (MWh) | Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh) |
|---|---|---|---|---|
| Japan | 18473.39 | 19533.28 | 40834.35 | 2900 |
| Taiwan, Greater China | 13.4 | 13.4 | 21.89 | 0 |
| Republic of Korea | 6.07 | 6.07 | 11.23 | 0 |
| United States of America | 35.66 | 35.66 | 78.1 | 0 |
| United Kingdom of Great Britain and Northern Ireland | 61.78 | 61.78 | 128.84 | 0 |

C7.6

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

By facility

C7.6b

**(C7.6b) Break down your total gross global Scope 2 emissions by business facility.**

| Facility | Scope 2 location-based emissions (metric tons CO2e) | Scope 2, market-based emissions (metric tons CO2e) |
|---|---|---|
| Minase Research Institute | 7516.9 | 7741.13 |
| Fukui Research Institute | 1976.7 | 2710.52 |
| Tsukuba Research Institute | 1867.73 | 722.81 |
| Fujiyama Plant | 2786.26 | 3133.22 |
| Joto Plant | 1026.74 | 1057.37 |
| Others (Headquarters and other Sales Offices) | 2173.97 | 2386.3 |
| ONO PHARMA TAIWAN CO., LTD | 13.4 | 13.4 |
| ONO PHARMA KOREA CO., LTD | 6.07 | 6.07 |
| ONO PHARMA USA | 35.66 | 35.66 |
| ONO PHARMA UK | 61.78 | 61.78 |
| Yamaguchi Plant | 1125.09 | 1781.93 |

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 | 4.6 | Decreased | 0.02 | Solar energy-based power generation amount increased thanks to the completion, in 2018, of our Tokyo Building equipped with solar power generation apparatuses. An emission change amount of 4.60 tons was derived from combined solar power generation at the Minase Research Institute, the Headquarters and the Tokyo Building multiplied with the applicable emission factor that depends on the electric utility company. An emissions differential ratio, 0.02%, was calculated from this amount by dividing it by the 30313.20 tons reported the last time for Scope 1 and 2 emissions. |
| Other emissions reduction activities | 1777.32 | Decreased | 5.86 | Emissions were reduced by implementing emissions-reducing measures such as renewing of the existing chillers to heat pump-type ones, switching to an electric company with a lower emissions factor related to power generation and using Green Energy Certificates. The reduction, 322,60 tons was obtained by multiplying usage of power and gas achieved through reduction activities by the emissions factor (market) corresponding to the reduction amount. The reduction through switching to an electric utility with a lower factor, 77.22 tons, was calculated by multiplying the power usage amount of the applicable business site by the difference between emissions factors. As for the reduction achieved through the purchase of Green Energy Certificates, 1377.50 tons, it was calculated by multiplying the purchased amount by the emissions factor for the electric utility used by the applicable business sites. The change rate, 5.86% was obtained by dividing the sum of the reductions (1777.32 tons) by the 30313.20 tons reported the last time for Scope 1 and 2 emissions. |
| Divestment | | <Not Applicable> | | |
| Acquisitions | | <Not Applicable> | | |
| Mergers | | <Not Applicable> | | |
| Change in output | 2465.46 | Increased | 8.13 | With the new Yamaguchi Plant's operation put into effect, and increases in production outputs and activities at the existing business sites, emissions increased. The change in emissions was calculated to be 2465.46 tons by multiplying the power and gas usage amounts of the respective business sites by the corresponding emissions factors (market) of the former electric utility and the present one. The change rate, 8.13%, was obtained by dividing the reduction by the 30313.20 tons reported the last time for Scope 1 and 2 emissions. |
| Change in methodology | 2026.89 | Decreased | 6.69 | At business sites located in Japan, emissions were reduced because of decrease in the emission factors of electric utilities contracting with our business sites. The emissions change amount, 2026,89 tons, were derived by multiplying the power usage amount of the respective business sits by the difference between emissions factors of the previous and the present electric utilities. The change rate 6.69% was calculated by divided it by the 30313.20 tons reported the last time for Scope 1 and 2 emissions. |
| Change in boundary | | <Not Applicable> | | |
| Change in physical operating conditions | 399.14 | Decreased | 1.31 | In most of Japan it was cooler during the summer and warmer during the winter than the previous year. Because of this weather, emissions were reduced. The reduction amount was calculated to be 399.14 tons, by multiplying the reduction amounts for power and gas usage due to the changed outside temperatures by the emissions factor (market) for reduced power and gas usage. The change rate, 1.31%, was obtained by dividing the reduction by the 30313.20 tons reported the last time for Scope 1 and 2 emissions. |
| Unidentified | | <Not Applicable> | | |
| Other | | <Not Applicable> | | |

C7.9b

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

Market-based

C8. Energy

C8.1

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

More than 0% but less than or equal to 5%

C8.2

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

| | Indicate whether your organization 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) | 0 | 49962.73 | 49962.73 |
| Consumption of purchased or acquired | <Not Applicable> | 2900 | 41006.65 | 43906.65 |
| Consumption of purchased or acquired heat | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of purchased or acquired steam | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of purchased or acquired cooling | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable> | 64.97 | <Not Applicable> | 64.97 |
| Total energy consumption | <Not Applicable> | 2964.97 | 90969.38 | 93934.35 |

C8.2b

**(C8.2b) Select the applications of your organization's consumption of fuel.**

| | Indicate whether your organization undertakes this fuel application |
|---|---|
| Consumption of fuel for the generation of electricity | Yes |
| Consumption of fuel for the generation of heat | Yes |
| Consumption of fuel for the generation of steam | Yes |
| Consumption of fuel for the generation of cooling | No |
| Consumption of fuel for co-generation or tri-generation | Yes |

C8.2c

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

**Fuels (excluding feedstocks)**
Diesel

**Heating value**
HHV (higher heating value)

**Total fuel MWh consumed by the organization**
16.46

**MWh fuel consumed for self-generation of electricity**
15.95

**MWh fuel consumed for self-generation of heat**
0.51

**MWh fuel consumed for self-generation of steam**
0

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

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

**Comment**

---

**Fuels (excluding feedstocks)**
Liquefied Natural Gas (LNG)

**Heating value**
HHV (higher heating value)

**Total fuel MWh consumed by the organization**
4676.94

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
0

**MWh fuel consumed for self-generation of steam**
4676.94

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

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

**Comment**

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**Fuels (excluding feedstocks)**
Petrol

**Heating value**
HHV (higher heating value)

**Total fuel MWh consumed by the organization**
45.95

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
45.95

**MWh fuel consumed for self-generation of steam**
0

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

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

**Comment**

---

**Fuels (excluding feedstocks)**
Town Gas

**Heating value**
HHV (higher heating value)

**Total fuel MWh consumed by the organization**
45178.77

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
534.78

**MWh fuel consumed for self-generation of steam**
19264.58

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

**MWh fuel consumed for self-cogeneration or self-trigeneration**
25379.41

**Comment**

---

**Fuels (excluding feedstocks)**
Kerosene

**Heating value**
HHV (higher heating value)

**Total fuel MWh consumed by the organization**
43.99

**MWh fuel consumed for self-generation of electricity**
43.99

**MWh fuel consumed for self-generation of heat**
0

**MWh fuel consumed for self-generation of steam**
0

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

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

**Comment**

---

**Fuels (excluding feedstocks)**
Liquefied Petroleum Gas (LPG)

**Heating value**
HHV (higher heating value)

**Total fuel MWh consumed by the organization**
0.62

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**
0.62

**MWh fuel consumed for self-generation of steam**
0

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

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

**Comment**

C8.2d

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

**Emission factor**
0.06857

**Unit**
metric tons CO2e per GJ

**Emission factor source**
Ministerial Ordinance related to calculation of GHG generated in business activities carried out by specifies emitter stipulated in Ministerial Order No. 3 of Ministry of Economy, Trade and Industry and Ministry of the Environment

**Comment**

**Kerosene Emission factor**
0.06783

**Unit**
metric tons CO2e per GJ

**Emission factor source**
Ministerial Ordinance related to calculation of GHG generated in business activities carried out by specifies emitter stipulated in Ministerial Order No. 3 of Ministry of Economy, Trade and Industry and Ministry of the Environment

**Comment**

**Liquefied Natural Gas (LNG)**

**Emission factor**
0.0495

**Unit**
metric tons CO2e per GJ

**Emission factor source**
Ministerial Ordinance related to calculation of GHG generated in business activities carried out by specifies emitter stipulated in Ministerial Order No. 3 of Ministry of Economy, Trade and Industry and Ministry of the Environment

**Comment**

**Liquefied Petroleum Gas (LPG)**

**Emission factor**
0.05903

**Unit**
metric tons CO2e per GJ

**Emission factor source**
Ministerial Ordinance related to calculation of GHG generated in business activities carried out by specifies emitter stipulated in Ministerial Order No. 3 of Ministry of Economy, Trade and Industry and Ministry of the Environment

**Comment**

**Petrol**

**Emission factor**
0.0671

**Unit**
metric tons CO2e per GJ

**Emission factor source**
Ministerial Ordinance related to calculation of GHG generated in business activities carried out by specifies emitter stipulated in Ministerial Order No. 3 of Ministry of Economy, Trade and Industry and Ministry of the Environment

**Comment Town**

**Gas**

**Emission factor**
0.04987

**Unit**
metric tons CO2e per GJ

**Emission factor source**
Ministerial Ordinance related to calculation of GHG generated in business activities carried out by specifies emitter stipulated in Ministerial Order No. 3 of Ministry of Economy, Trade and Industry and Ministry of the Environment

**Comment**

C8.2e

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

| | Total Gross generation (MWh) | Generation that is consumed by the organization (MWh) | Gross generation from renewable sources (MWh) | Generation from renewable sources that is consumed by the organization (MWh) |
|---|---|---|---|---|
| Electricity | 8921.12 | 8921.12 | 64.97 | 64.97 |
| Heat | 346.3 | 346.3 | 0 | 0 |
| Steam | 23941.52 | 23941.52 | 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**
Other, please specify (Green Energy Certificates)

**Low-carbon technology type**
Biomass (including biogas)

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

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**
2900

**Emission factor (in units of metric tons CO2e per MWh)**
0

**Comment**

## C9. Additional metrics

### C9.1

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

## C10. Verification

### C10.1

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

| | Verification/assurance status |
|---|---|
| Scope 1 | Third-party verification or assurance process in place |
| Scope 2 (location-based or market-based) | Third-party verification or assurance process in place |
| Scope 3 | Third-party verification or assurance process in place |

### C10.1a

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

**Scope**
Scope 1

**Verification or assurance cycle in place**
Annual process

**Status in the current reporting year**
Underway but not complete for reporting year-previous statement of process attached

**Type of verification or assurance**

Limited assurance

**Attach the statement**
Independent Practitioner's Assurance csr2018.pdf

**Page/ section reference**
Page 1

**Relevant standard**
ISAE3000

**Proportion of reported emissions verified (%)**
100

---

**Scope**
Scope 1

**Verification or assurance cycle in place**
Annual process

**Status in the current reporting year**
Underway but not complete for reporting year-previous statement of process attached

**Type of verification or assurance**
Limited assurance

**Attach the statement**
Independent Practitioner's Assurance csr2018.pdf

**Page/ section reference**
Page 1

**Relevant standard**
ISAE 3410

**Proportion of reported emissions verified (%)**
100

---

**Scope**
Scope 2 location-based

**Verification or assurance cycle in place**
Annual process

**Status in the current reporting year**
Underway but not complete for reporting year-previous statement of process attached

**Type of verification or assurance**
Limited assurance

**Attach the statement**
Independent Practitioner's Assurance csr2018.pdf

**Page/ section reference**
Page 1

**Relevant standard**
ISAE3000

**Proportion of reported emissions verified (%)**
100

---

**Scope**
Scope 2 location-based

**Verification or assurance cycle in place**
Annual process

**Status in the current reporting year**

Underway but not complete for reporting year-previous statement of process attached

**Type of verification or assurance**
Limited assurance

**Attach the statement**
Independent Practitioner's Assurance csr2018.pdf

**Page/ section reference**
Page 1

**Relevant standard**
ISAE 3410

**Proportion of reported emissions verified (%)**
100

C10.1b

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

**Scope**
Scope 3- all relevant categories

**Verification or assurance cycle in place**
Annual process

**Status in the current reporting year**
Underway but not complete for reporting year – previous statement of process attached

**Attach the statement**
Independent Practitioner's Assurance csr2018.pdf

**Page/section reference**
Page 1

**Relevant standard**
ISAE3000

C10.2

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**
No, but we are actively considering verifying within the next two years

## C11. Carbon pricing

C11.1

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

C11.1a

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

Japan carbon tax

C11.1c

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

**Japan carbon tax**

**Period start date**

April 1 2018

**Period end date**

March 31 2019

**% of emissions covered by tax**

33.12

**Total cost of tax paid**

6633559.49

**Comment**

C11.1d

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

As a strategy for reducing fossil fuel use on which a carbon tax will be levied, we are promoting renewal of boilers to high-efficiency ones, use of fuel with a lower tax rate, fuel usage reduction through making production processes more efficient and so on. Also, we are examining the possible use of biomass fuel. As an example of a measure implemented during the reporting year, making the cleaning method for cages for experimental animals more efficient at the Minase Research Institute can be mentioned, in which usage of city gas was reduced by about 900 $m^3$ annually.

C11.2

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

Yes

C11.2a

**(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.**

**Credit origination or credit purchase**
Credit purchase

**Project type**
Biomass energy

**Project identification**
We purchased a credit for biomass power generation. Use of this credit last year is attributable to power generation at Hyogo Pulp Co., Ltd.

**Verified to which standard**
Please select

**Number of credits (metric tonnes CO2e)**
1377.5

**Number of credits (metric tonnes CO2e): Risk adjusted volume**
1377.5

**Credits cancelled**
No

**Purpose, e.g. compliance**
Voluntary Offsetting

C11.3

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

C11.3a

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

**Objective for implementing an internal carbon price**
Drive low-carbon investment

**GHG Scope**
Scope 1
Scope 2

**Application**
((1) Last fiscal year's CO2 emissions × (2) Reduction target ratio (%) from last fiscal year's emissions × (3) Cost to realize emissions by 1 ton)
The cost calculated from this formula is made an in-house carbon budget for a single year, which is to be utilized for low-carbon investment, etc. following the lead of the CSR Promotion Section and the Environmental Management Committee. Incidentally, reductions through Green Energy Certificates and the like that have their reduction effect on only a single year are not considered for the reduction term (1).

**Actual price(s) used (Currency /metric ton)**
8079

**Variance of price(s) used**
Our carbon budget was 8,466,792 yen for the last fiscal year. Actual spending was 5,000,000 yen for purchase of a Green Energy Certificates and 4,556,000 yen for capital investment, surpassing the carbon budget. Our thinking for capital investment is that it should be the cost difference between general equipment and energy-efficient Top Runner Program equipment.

**Type of internal carbon price**
Internal fee

**Impact & implication**
The aim here is to facilitate introduction of long-term actions such as capital investment accompanying the renewal of chillers required for managing air conditioning and solar power generation equipment that can lead to a reduction of carbon budget in the next term as well. Also, in this way, since sufficient funding can be secured from company's management based on a reduction target, it becomes possible to implement a steady yet bold measure to achieve the target. For the management, the more emissions are reduced, the lower the carbon budget will become. Then, they will be able to tackle CO2 emissions restricting measures more aggressively on a company-wide basis.

## 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.

**Type of engagement**
Information collection (understanding supplier behavior)

**Details of engagement**
Collect climate change and carbon information at least annually from suppliers

**% of suppliers by number**
12

**% total procurement spend (direct and indirect)**
86

**% Scope 3 emissions as reported in C6.5**
7.92

**Rationale for the coverage of your engagement**
We approach engagement with our suppliers in two stages: In the first stage, we try to understand each supplier's status of implementing countermeasures against climate change based on its public information disclosures. In the second stage, we set up an opportunity for proposing corrective measures through engagement with it mediated by EcoVadis assessment. By subjecting suppliers representing 80% of our business transactions to this process, the main suppliers can be covered. We think it is possible in this way to manage engagement with most of our suppliers.

**Impact of engagement, including measures of success**
Production of pharmaceutical drugs is the only business we engage in. We sell no products that may affect climate change. Also, the pharmaceutical industry is, relatively speaking, an industry sector with small impact on climate change. Therefore, Scope 3 emissions reductions are very important means of reducing the risk of climate change for us. By proposing corrective measures in more detail with engagement through EcoVadis, it becomes easier to have the supplier implement CO2 usage reducing measures. We use the supplier's EcoVadis score as a yardstick for the success of corrective measures implemented by it. This is the reason why we track the score improvements of our supplier's.

**Comment**

## C12.3

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

Direct engagement with policy makers
Trade associations

## C12.3a

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

| Focus of legislation | Corporate position | Details of engagement | Proposed legislative solution |
|---|---|---|---|
| Mandatory carbon reporting | Support | Since over 99% of our Scope 1 and 2 emissions are from locations within Japan, we coordinate our actions with Japanese regulations. Specifically, in support of people in charge of policies and legislation, such as the Act on Promotion of Global Warming Countermeasures and the Act on Rationalizing Energy Use, that obligate Japanese businesses to reduce GHG emissions and energy use and report on emissions and energy usage reductions, we implement activities to reduce emissions and energy usage and appropriately make reports on such activities. | We support laws/regulations concerning the reduction of GHG emissions and energy use without exception. |

## 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**

Japan Pharmaceutical Manufacturers Association

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

Seventy-two of so-called "new pharmaceutical drug" manufacturers are members of this association, and it is tasked with making requests to governments and other economic associations. The association promotes measures against climate change following the national government's policies. It also engages in multi-faceted activities such as those for resolving problems common to the pharmaceutical industry and for deepening manufacturers' understanding of medicines and those for international cooperation. Also, it strives to promote sound development of the industry through strengthening policy agreements and recommendations, implementing measures for internationalization and reinforcing public relations.

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

We, as a member of the association, explain its position and makes policy recommendations to governments at various levels indirectly through the industry association.

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?**

We obtain the latest information at seminars sponsored by the Ministry of Economy, Trade and Industry and the Ministry of the Environment and at technology exchange meetings held by the Japan Pharmaceutical Manufacturers Association. If changes are made to the content of information, we compile a report, and circulate it among the members of the Environmental Management Committee. Furthermore, important issues among them are tabled at meetings of the Committee to confirm whether they are in line with our climate change strategies.

C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

**Publication**
In voluntary sustainability report

**Status**
Underway – previous year attached

**Attach the document**
Corporate Report 2018all.pdf
CSR Report 2018all.pdf

**Page/Section reference**
Governance: P.31/CSR Report and P.47/Corporate Report
Strategy: P.30/CSR Report and P. 47 & 48/Corporate Report
Risk: P. 32 – 37/CSR Report
Emissions:P.  30, 31, 33, 35, 36 & 42/CSR Report and P.48/Corporate Report
Emissions target: P.30/CSR Report and P.48/Corporate Report

**Content elements**
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

**Comment**

We have set Environmental Vision and new reduction targets for GHG. As a result, the strategies and targets described in this questionnaire and those describe in FY2018 report are greatly different.

## 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 | Member of the Board of Directors, Senior Executive Officer/Executive Director of the General Administration Headquarters | Director on board |

## Submit your response

**In which language are you submitting your response?**
Japanese

**Please confirm how your response should be handled by CDP**

| | Public or Non-Public Submission | I am submitting to |
|---|---|---|
| I am submitting my response | Public | Investors |

**Please confirm below**

I have read and accept the applicable Terms