

CDP 2009 Information Request

Respondent: Sun Microsystems, Inc.

General introduction

Risk and Opportunities

1. Regulatory Risks: (CDP6 1(a)(i))

1.1 Is your company exposed to regulatory risks related to climate change?

We consider our company to be exposed to regulatory risks.

We consider our company to be exposed to risks associated with climate change regulations:

Given the nature and magnitude of Sun Microsystems' (Sun's) GHG emissions, the company is unlikely to be directly regulated under current or proposed climate change legislation in the US and other countries. Sun is most likely to feel the impacts of these regulations as 1) higher energy costs, 2) inappropriate product and reporting requirements, and 3) increased cost of regulatory compliance and reporting.

1. Computing equipment runs on electricity. If climate-related regulation results in a major increase in the cost of electricity, Sun will experience an increase in its own operating cost. More importantly, it will cost more for Sun's customers to use our products, which will eventually have a dampening effect on demand for our products.

2. Our products are very complex, and are used in a wide array of applications. There is a growing chance for energy efficiency standards or product reporting standards to be done in a way which distorts the market in favor of or against specific technologies or approaches. We already have cases where our most efficient products are penalized by efficiency standards due to the same unique features which are making them efficient. In other cases we have seen proposals for measuring embodied energy that are unrealistic for our industry, and would add operating cost without environmental benefit.

3. We anticipate that our cost of environmental reporting alone is over \$1M/year and continues to rise. The lack of standards for measurement and legal patchworks of local, state, provincial and regional regulations has the potential to drive these costs significantly higher, while providing no environmental benefit.

Further information

2. Physical Risks: (CDP6 1(a)(ii))

2.1 Is your company exposed to physical risks from climate change?

We consider our company to be exposed to physical risks.

Sun's revenue and financial condition could be adversely affected by natural disasters and other business disruptions related to climate change. Key areas of concern include:

Power outages, shortages and blackouts in major operations areas in the US, such as California and the East Coast, have occurred in the past and may occur with increasing frequency in the future, disrupting our own operations as well as those of our suppliers, partners, and customers.

Facilities located near coastlines and other tidal zones, such as those in Menlo Park, California, could be adversely impacted by a sea level rise of only a few feet.

Sun uses contract manufacturers and other suppliers throughout the world. Climate change-related weather events or socio-economic impacts (e.g. population displacement, infrastructure disruption) in countries where these suppliers' facilities are located could negatively impact our ability to build and/or deliver our products to customers throughout the world.

Further information

3. Other Risks: (CDP6 1(a)(iii))

3.1 Is your company exposed to other risks as a result of climate change?

We consider our company to be exposed to other risks.

In addition to the reasons cited above, we consider our company to be exposed to other risks due to the rapid expansion of the network and the accompanying increase in data center power consumption. The carbon footprint of these facilities are gaining worldwide attention, and will be under increased scrutiny. We believe that this attention could, ultimately, result in a negative selling environment, which would dampen our business prospects.

Further information

4. Regulatory Opportunities: (CDP6 1(b)(i))

4.1 Do regulatory requirements on climate change present opportunities for your company?

Regulatory requirements present opportunities for my company.

We consider that current or anticipated regulatory requirements offer the following opportunities:

- Regulatory requirements related to data center efficiency and/or computer server efficiency could drive demand for Sun products and services offerings.

- Rising fuel costs and limits on organizations' overall carbon footprint could encourage large-scale telework initiatives such as Sun's in-house Open Work program and drive adoption/use of Sun's cloud computing initiative. This could, in turn, drive demand for expanded network infrastructure and services and positively drive Sun's revenue.

Further information

5. Physical Opportunities: (CDP6 1(b)(ii))

5.1 Do physical changes resulting from climate change present opportunities for your company?

Physical changes present opportunities for my company.

We believe that current or anticipated physical changes offer opportunities:

Sun has products and systems that are well placed to provide network infrastructure that can respond to physical changes and sudden events. The Sun Modular Data Center S20 is, essentially, a datacenter in a box. Since the "box" is a standard shipping container, these datacenters are free of the constraints (and potential to be in harms way) inherent in traditional "bricks and mortar" datacenters. For instance, in the event of a severe weather incident that interrupts power or poses a physical risk, the container can be easily relocated. Disaster recovery organizations can take the SMD into the field and provide IT infrastructure where it's needed. These are just some examples of the potential evolution of computing in the face of climate change

Sun has unique technology and expertise in utility computing (aka "cloud computing"), where organizations access remote resources over the network as opposed to building local datacenters. This approach will be important as some geographical areas are become more exposed to climate effects and threats.

Further information

6. Other Opportunities: (CDP6 1(b)(iii))

6.1 Does climate change present other opportunities for your company?

Climate change presents other opportunities for my company.

Increasingly, Sun's customers and partners indicate their desire to do business with companies that are environmentally and socially responsible. Many of these companies are, like Sun, working to address climate change in their own operations as well as develop products and services that support their customers' energy efficiency and sustainability goals. Sun's leadership in carbon reduction and transparency, as well as the technologies we've developed will continue to make us an attractive choice when selecting technology providers.

Further information

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

7. Reporting Year (CDP6 Q2(a)(ii))

Information about how to respond to this section may be found in "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)" developed by the World Resources Institute and the World Business Council for Sustainable Development ("the GHG Protocol"), see <http://www.ghgprotocol.org/>. ISO 14064-1 is compatible with the GHG Protocol as are a number of regional/national programme protocols. For more information see <http://www.ghgprotocol.org/> and use the guidance button above.

Please provide CDP with responses to questions 7, 8, 9, 10.1, 10.2, 11.1 and 11.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last.

Questions 10.1, 10.2, 11.1, and 11.2 are on subsequent webpages and the dates that you give in answer to question 7 will be carried forwards to automatically populate those webpages.

7.1. Please state the start date and end date of the year for which you are reporting GHG emissions.

Start date: 01 January 2008

End date: 31 December 2008

Other: Sun calculates and greenhouse gas emissions based on the calendar year to align with the EPA Climate Leaders program. For CDP7, we are reporting emissions for both calendar 2008 (January 2008 through December 2008), as well as totals for calendar 2007 (January 2007 through December 2007), the base year for our current carbon reduction commitment. The 2007 base year has been updated to use new emission factors available from the US EPA (eGrid 2007) and the Greenhouse Gas Protocol.

8. Reporting Boundary: (CDP6 Q2(a)(i))

8.1. Please indicate the category that describes the company, entities, or group for which Scope 1 and Scope 2 GHG emissions are reported.

Companies over which operational control is exercised.

8.2. Please state whether any parts of your business or sources of GHG emissions are excluded from your reporting boundary.

At this time, Sun does not estimate greenhouse gas emissions resulting from the production or use/disposal of our products (Scope 3). Through our work with the Electronics Industry Citizenship Coalition, we are working to collect GHG estimates from our top tier suppliers. Additionally, we are developing internal models for quantifying emissions from the logistics portion of our supply chain, and expect some baseline estimates to be available in our FY09 corporate sustainability report (coming in October 2009).

9. Methodology: (CDP6 Q2(a)(iii))

9.1. Please describe the process used by your company to calculate Scope 1 and Scope 2 GHG emissions including the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 GHG emissions.

Please provide your answer in the text box. In addition to this description, if relevant, select a methodology from the list of published methodologies. This will aid automated analysis of the data.

Sun calculates its corporate-wide emissions using the Climate Leaders GHG Inventory Guidance, which defines how Partners working with EPA inventory and report their GHG emissions. This Guidance is based on the existing GHG Protocol Corporate Accounting and Reporting Standard developed by the World Resources Institute and the World Business Council for Sustainable Development. Climate Leaders GHG Inventory Guidance details methodologies for quantifying emissions from Scope 1 and Scope 2 emissions and has recently added Scope 3 methodologies for employee commuting, business travel, and product transport.

Select methodologies:

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

Please also provide:

9.2 Details of any assumptions made.

Scope 1 emissions from minor sources - fugitive, mobile sources - are not calculated annually. Yearly totals are assumed to be equivalent to the base year (2007).

9.3 The names of and links to any calculation tools used.

Emissions from building energy use (electricity and natural) calculated using OpenEco.org (<http://www.openeco.org/>).

Mobile source and fugitive emissions calculated using tools/methodologies provided by EPA Climate Leaders (<http://www.epa.gov/climateleaders/cross-sector.html>).

Select calculation tools:

GHG Protocol - CO2 emissions from business travel 1.2 August 2005

GHG Protocol - CO2 emissions from fuel use in facilities 3.0 March 2008

GHG Protocol - CO2 emissions from transport or mobile sources 1.3 January 2005

GHG Protocol - Indirect CO2 emissions from purchased electricity 3.0 March 2008

9.4 The global warming potentials you have applied and their origin.

Sun uses the 100 year time horizon global warming potentials, consistent with the 1996 reporting guidelines published by the Intergovernmental Panel on Climate Change1 (IPCC) (http://unfccc.int/ghg_data/items/3825.php).

GWP values:

CO2 = 1

CH4 = 21

N2O = 310

HFC 227ea = 2,900

HFC 134a = 1,300

HFC R22 = 1,700

HFC 404a = 3,260

9.5 The emission factors you have applied and their origin.

Source type: Electricity consumption (Scope 2)

Emission factors: For US buildings, the eGrid 2007 Version 1.1 emission factors developed by the Energy Information Administration (<http://www.epa.gov/cleanenergy/energy-resources/egrid/index.html>). For non-US buildings that do not have specific renewable energy contracts, the country-specific factors provided by the WRI Greenhouse Gas Protocol are used (http://www.ghgprotocol.org/downloads/calcs/ElectricityPurchase_ServiceSector_v3.0.xls). For buildings in the United Kingdom and in Germany served by renewable energy, the grid average emission factors provided by the utility company are used.

Source types: Stationary combustion, fugitive emissions, mobile combustion (Scope 1)

Emission factors: guidance from EPA Climate Leaders (<http://www.epa.gov/climateleaders/resources/cross-sector.html>)

Further information

10. Scope 1 Direct GHG Emissions: (CDP6 Q2(b)(i))

Instructions for question 10 and question 11 (following page)

When providing answers to questions 10 and 11, please do not deduct offset credits, Renewable Energy Certificates etc, or net off any estimated avoided emissions from the export of renewable energy, carbon sequestration (including enhanced oil recovery) or from the use of goods and services. Opportunities to provide details of activities that reduce or avoid emissions are provided elsewhere in the information request.

Carbon dioxide emissions from biologically sequestered carbon e.g. carbon dioxide from burning biomass/biofuels should be reported separately from emissions Scopes 1, 2 and 3. If relevant, please report these emissions in question 15. However, please do include any nitrous oxide or methane emissions from biomass/biofuel combustion in your emissions under the three scopes.

Please answer the following questions using Table 1.

Please provide:

10.1. Total gross global Scope 1 GHG emissions in metric tonnes of CO₂-e

Please break down your total gross global Scope 1 emissions by:

10.2. Country or region

Please provide CDP with responses to questions 10.1 and 10.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last. Table 1 (below) and table 5 (Q11.1 and 11.2) will be automatically populated with the dates that you give in answer to 7.1.

Electric utilities should report emissions by country/region using the table in question EU3.

Table 1 - Please use whole numbers only. Use the "Other" option in the drop down menu to enter the name of a region.

| | | |
|--|------------|------------|
| Reporting year Q7.1 Start date | 01/01/2008 | 01/01/2007 |
| Reporting year Q7.1 End date | 31/12/2008 | 31/12/2007 |
| 10.1 Total gross global Scope 1 GHG emissions in metric tonnes CO₂-e | 10029 | 10211 |
| 10.2 Gross Scope 1 emissions in metric tonnes CO₂-e by country or region | | |
| Belgium | 31 | 26 |
| France | 54 | 7 |
| Germany | 216 | 82 |
| United Kingdom | 323 | 346 |
| Ireland | 6 | 24 |
| USA | 9391 | 9723 |
| Italy | 8 | 4 |

Your answer to question 10.1 will be automatically carried forward to tables 2 and 3 below if you add a country or region in answer to 10.2 or press "Save" at the end of the page.

Please tick the box if your total gross global Scope 1 figure (Q10.1) includes emissions that you have transferred outside your reporting boundary (as given in answer to 8.1). Please report these transfers under 13.5.

Where it will facilitate a better understanding of your business, please also break down your total global Scope 1 emissions by:

10.3. Business division

and/or

10.4. Facility

10.3. Business division (only data for the current reporting year requested)

Table 2 - Please use whole numbers only.

| Business Divisions - Enter names below | Scope 1 Metric tonnes CO₂-e |
|--|---|
| Total gross global Scope 1 GHG emissions in metric tonnes CO₂-e - answer to question Q10.1 | 10029 |

10.4. Facility (only data for the current reporting year requested)

Table 3 - Please use whole numbers only.

| Facilities - Enter names below | Scope 1 Metric tonnes CO ₂ -e |
|---|--|
| Total gross global Scope 1 GHG emissions in metric tonnes CO ₂ -e - answer to question Q10.1 | 10029 |

10.5. Please break down your total global Scope 1 GHG emissions in metric tonnes of the gas and metric tonnes of CO₂-e by GHG type. (Only data for the current reporting year requested.)

Table 4 - Please use whole numbers only.

| Scope 1 GHG Type | Unit | Quantity |
|------------------|----------------------------------|----------|
| CO ₂ | Metric tonnes | 8509 |
| CH ₄ | Metric tonnes | 1 |
| CH ₄ | Metric tonnes CO ₂ -e | 17 |
| N ₂ O | Metric tonnes | 0 |
| N ₂ O | Metric tonnes CO ₂ -e | 5 |
| HFCs | Metric tonnes | 1 |
| HFCs | Metric tonnes CO ₂ -e | 1094 |
| PFCs | Metric tonnes | |
| PFCs | Metric tonnes CO ₂ -e | |
| SF ₆ | Metric tonnes | |
| SF ₆ | Metric tonnes CO ₂ -e | |

10.6. If you have not provided any information about Scope 1 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 1 GHG emissions information in future.

Further information

11. Scope 2 Indirect GHG Emissions: (CDP6 Q2(b)(i))

Important note about emission factors where zero or low carbon electricity is purchased:

The emissions factor you should use for calculating Scope 2 emissions depends upon whether the electricity you purchase is counted in calculating the grid average emissions factor or not – see below. You can find this out from your supplier.

Electricity that IS counted in calculating the grid average emissions factor:

Where electricity is sourced from the grid and that electricity has been counted in calculating the grid average emissions factor, Scope 2 emissions must be calculated using the grid average emissions factor, even if your company purchases electricity under a zero or low carbon electricity tariff.

Electricity that is NOT counted in calculating the grid average emissions factor:

Where zero or low carbon electricity is sourced from the grid or otherwise transmitted to the company and that electricity is not counted in calculating the grid average, the emissions factor specific to that method of generation can be used, provided that any certificates quantifying GHG-related environmental benefits claimed for the electricity are not sold or passed on separately from the electricity purchased.

[Click here](#) to see the instructions from the previous page on answering question 11.

Please answer the following questions using Table 5.

Please provide:

11.1. Total gross global Scope 2 GHG emissions in metric tonnes of CO₂-e.

Please break down your total gross global Scope 2 emissions by:

11.2. Country or region

Please provide CDP with responses to questions 11.1 and 11.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last. Table 5 will be automatically populated with the dates that you gave in answer to 7.1.

Table 5 - Please use whole numbers only. Use the "Other" option in the drop down menu to enter the name of a region.

| | | |
|--------------------------------|------------|------------|
| Reporting year Q7.1 Start date | 01/01/2008 | 01/01/2007 |
| Reporting year Q7.1 End date | 31/12/2008 | 31/12/2007 |

| | | |
|--|---------------|---------------|
| 11.1 Total gross global Scope 2 GHG emissions in metric tonnes CO₂-e | 238967 | 249037 |
| 11.2 Gross Scope 2 emissions in metric tonnes CO₂-e by country or region | | |
| Australia | 5146 | 5319 |
| Belgium | 410 | 386 |
| China | 4285 | 4172 |
| Czech Republic | 1651 | 1612 |
| Denmark | 88 | 10 |
| France | 785 | 832 |
| Germany | 4210 | 3762 |
| Hong Kong | 517 | 682 |
| India | 11790 | 3932 |
| Ireland | 1784 | 2102 |
| Israel | 639 | 312 |
| Italy | 2451 | 1594 |
| Japan | 3838 | 4031 |
| Norway | 7 | 7 |
| Poland | 196 | 302 |
| Portugal | 96 | 92 |
| Russia | 1130 | 1021 |
| Singapore | 4737 | 4983 |
| Slovakia | 70 | 64 |
| South Africa | 594 | 390 |
| Spain | 742 | 1082 |
| Sweden | 43 | 48 |
| Switzerland | 47 | 64 |
| Taiwan | 412 | 490 |
| Thailand | 136 | 130 |
| Turkey | 68 | 65 |
| United Kingdom | 14414 | 19397 |
| USA | 176230 | 179927 |
| South Korea | 1289 | 1070 |
| Malaysia | 174 | 173 |
| Netherlands | 935 | 868 |
| New Zealand | 106 | 116 |

Your answer to 11.1 will be automatically carried forward to tables 6 and 7 below if you add a country or region in answer to 11.2 or press "Save" at the end of the page.

Where it will facilitate a better understanding of your business, please also break down your total global Scope 2 emissions by:

- 11.3. Business division
- and/or
- 11.4. Facility

11.3. Business division (only data for the current reporting year requested)

Table 6 - Please use whole numbers only.

| Business Divisions - Enter names below | Scope 2 Metric tonnes CO₂-e |
|--|---|
| Total gross global Scope 2 GHG emissions in metric tonnes CO₂-e - answer to question Q11.1 | 238967 |

11.4. Facility (only data for the current reporting year requested)

Table 7 - Please use whole numbers only.

| Facilities - Enter names below | Scope 2 Metric tonnes CO₂-e |
|--|---|
| Total gross global Scope 2 GHG emissions in metric tonnes CO₂-e - answer to question Q11.1 | 238967 |

11.5. If you have not provided any information about Scope 2 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 2 GHG emissions information in future.

Further information

12. Contractual Arrangements Supporting Particular Types of Electricity Generation: (CDP6 Q2(b)(i)- Guidance)

12.1. If you consider that the grid average factor used to report Scope 2 emissions in question 11 does not reflect the contractual arrangements you have with electricity suppliers, (for example, because you purchase electricity using a zero or low carbon electricity tariff), you may calculate and report a contractual Scope 2 figure in response to this question, showing the origin of the alternative emission factor and information about the tariff.

As noted in our response to Question 9.5 above, Sun purchases renewable energy for some of our facilities in Ireland, the UK, and Germany. For Germany the certificate from the plant the produces our energy is attached to this CDP response.

In the UK, we receive Renewable Guarantees of Origin (REGOs).

In Ireland, the grid average emission factor is used.

12.2. If you retire any certificates (eg: Renewable Energy Certificates) associated with zero or low carbon electricity, please provide details.

Further information

13. Scope 3 Other Indirect GHG Emissions: (CDP6 Q2(c))

For each of the following categories, please:

- Describe the main sources of emissions,

- Report emissions in metric tonnes of CO₂-e,

- state the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

Notes about question 13

When providing answers to question 13, please do not deduct offset credits, Renewable Energy Certificates etc, or net off any estimated avoided emissions from the export of renewable energy, carbon sequestration (including enhanced oil recovery) or from the use of goods and services. Opportunities to provide details of activities that reduce or avoid emissions are provided elsewhere in the information request.

Carbon dioxide emissions from biologically sequestered carbon e.g. carbon dioxide from burning biomass/biofuels should be reported separately from emissions Scopes 1, 2 and 3. If relevant, please report these emissions in question 15. However, please do include any nitrous oxide or methane emissions from biomass/biofuel combustion in your emissions under the three scopes.

13.1 Employee business travel

Describe the main sources of emissions

The majority of Sun's business travel-related Scope 3 emissions are the result of air travel. Other sources include travel by rail and rental car, as well as hotel stays.

Emissions in metric tonnes CO₂-e.

Air = 71,466 tonnes

Car = 2,986 tonnes

Rail = 212 tonnes

Hotel = 7261

Total = 81,926 metric tonnes

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

Business travel emissions estimates are provided to Sun by our corporate travel provider, American Express. Emissions are calculated using methodologies, definitions and factors developed by the WRI, DEFRA UK and the GHG Protocol Mobile Combustion process. Calculations are based on distance traveled by travel mode. An average of 80 miles per rental car day is assumed.

13.2. External distribution/logistics

Describe the main sources of emissions

Sun outsources the majority of our manufacturing, many of whom are across the world from the customers that will ultimately receive the finished products. Shipping components and finished goods via air, rail, truck and ship is by far, we believe, the largest source of GHG emissions from logistics and distribution. We are in the process of creating baseline assumptions for logistics and warehousing, working collaboratively with our logistics providers.

Emissions in metric tonnes CO₂-e.

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

13.3 Use/disposal of company's products and services

For auto manufacture and auto component companies – please refer to the additional questions for these sectors before completing question 13.3. Describe the main sources of emissions

At this time, Sun does not estimate greenhouse gas emissions resulting from the production or use/disposal of our products (Scope 3). Through our work with the Electronics Industry Citizenship Coalition, we are working to collect GHG estimates from our top tier suppliers. Additionally, we are developing internal models for quantifying emissions from the logistics portion of our supply chain, and expect some baseline estimates to be available in our FY09 corporate sustainability report (coming in October 2009).

Emissions in metric tonnes CO₂-e.

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

13.4 Company supply chain

Describe the main sources of emissions

See 13.3 above.

Emissions in metric tonnes CO₂-e.

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

13.5 Other

If you are reporting emissions that do not fall into the categories above, please categorise them into transferred emissions and non-transferred emissions (please see guidance for an explanation of these terms).

Please report transfers in the first three input fields and non-transfers in the last three input fields.

Transfers
Describe the main sources of emissions

Transfers
Report emissions in metric tonnes of CO₂-e.

Transfers
State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

Non-transfers
Describe the main sources of emissions

Non-transfers
Report emissions in metric tonnes of CO₂-e.

Non-transfers

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

13.6 If you have not provided information about one or more of the categories of Scope 3 GHG emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 3 indirect emissions information in future.

[See 13.3 above.](#)

Further information

14. Emissions Avoided Through Use Of Goods And Services (New for CDP 2009)

14.1. If your goods and/or services enable GHG emissions to be avoided by a third party, please provide details including the estimated avoided emissions, the anticipated timescale over which the emissions are avoided and the methodology, assumptions, emission factors (including sources), and global warming potentials (including sources) used for your estimations.

Further information

15. Carbon Dioxide Emissions from Biologically Sequestered Carbon: (New for CDP 2009)

An example would be carbon dioxide from burning biomass/biofuels.

15.1. Please provide the total global carbon dioxide emissions in metric tonnes CO₂ from biologically sequestered carbon.

Emissions in metric tonnes CO₂ - Please use whole numbers only

Further information

16. Emissions Intensity: (CDP6 Q3(b))

16.1. Please supply a financial emissions intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.

Please describe the measurement.

[Total CO₂e emissions \(Scope 1 & 2\) for calendar 2008, divided by the sum of quarterly revenue for calendar 2008](#)

16.1.1. Give the units. For example, the units could be metric tonnes of CO₂-e per million Yen of turnover, metric tonnes of CO₂-e per US\$ of profit, metric tonnes of CO₂-e per thousand Euros of turnover.

[lbs CO₂e per \\$ revenue.](#)

16.1.2. The resulting figure.

Use a decimal point if necessary. Please use a "." rather than a ",", i.e. please write 15.6 rather than 15,6

[0.04](#)

16.2. Please supply an activity related intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.

Please describe the measurement.

16.2.1. Give the units e.g. metric tonnes of CO₂-e per metric tonne of output or for service sector businesses per unit of service provided.

16.2.2. The resulting figure.

Use a decimal point if necessary. Please use a "." rather than a "," i.e. please write 15.6 rather than 15,6

Further information

17. Emissions History: (CDP6 Q2(f))

17.1. Do emissions for the reporting year vary significantly compared to previous years?

Yes

Emissions represent a 4% year over year reduction between calendar 2007 and 2008.

If the answer to 17.1 is Yes:

17.1.1. Estimate the percentage by which emissions vary compared with the previous reporting year.

This box will accept numerical answers containing a decimal point. Please use "." not "," i.e. write 10.6, not 10,6.

4 %

Have the emissions increased or decreased?

Decreased

Further information

<http://cdp.cdproject.net/attachedfiles/Responses/54187/12841/SunMicroSummary.2008-072809.xls>

18. External Verification/Assurance: (CDP6 Q2(d))

18.1. Has any of the information reported in response to questions 10 – 15 been externally verified/assured in whole or in part?

Yes, it has been externally verified/assured in whole or in part.(Please continue with questions 18.2 to 18.5)

It would aid automated analysis of responses if you could select responses from the tick boxes below. However, please use the text box provided if the tick boxes menu options are not appropriate.

18.2. State the scope/boundary of emissions included within the verification/assurance exercise.

Scope 1 Q10.1

Scope 2 Q11.1

Please use the text box below to describe the scope/boundary of emissions included within the verification/assurance exercise if the tick box menu options above are not applicable.

Sun's Scope 1 and Scope 2 emissions estimates are included in the EPA review (see 18.3 below).

18.3. State what level of assurance (eg: reasonable or limited) has been given.

EPA's Climate Leaders program continually reviews our emissions inventory data as well as our progress in reaching our GHG emissions goal. In addition, Sun is receiving technical assistance from EPA in determining organizational and operational boundaries, identifying the most appropriate emission factors for Sun's industry (ICT technology), and in documenting these decisions in an Inventory Management Plan (IMP) that will ensure consistency and transparency in the inventory over time. EPA performs desktop reviews of both the inventory data and IMP to ensure they meet EPA's quality standards, and also conducts a risk-based on-site IMP review to ensure that the Management Plan is being implemented at the facility level. These reviews provide assurance to EPA that a well-implemented GHG data collection and management system is in place to track progress towards our GHG reduction goal of 20% between 2007 and 2015, and result in EPA recognition for corporate leadership on the climate change issue.

18.4. Provide a copy of the verification/assurance statement.

Please attach a copy/copies.

18.5. Specify the standard against which the information has been verified/assured.

The GHG emissions data submitted under Climate Leaders is reviewed against the Climate Leaders GHG Inventory Guidance, which is based on the Corporate Accounting and Reporting Standard developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).

18.6. If none of the information provided in response to questions 10-15 has been verified in whole or in part, please state whether you have plans for GHG emissions accounting information to be externally verified/assured in future.

Further information

19. Data Accuracy: (CDP6 Q2(e) – New wording for CDP 2009)

19.1. What are the main sources of uncertainty in your data gathering, handling and calculations e.g.: data gaps, assumptions, extrapolation, metering/measurement inaccuracies etc?

If you do not gather emissions data, please select emissions data is NOT gathered and proceed to question 20.

Emission data is gathered.

Sun's GHG emissions inventory is predominantly the result of energy use in our operations (Scope 1 & 2). As a result, the accuracy of our inventory is strongly dependent upon the quality of the utility usage information database, created and maintained by our facilities management company. While some comparisons between database values and utility billing statements have been performed, it is still possible that the utility use information in the database is incorrect (e.g. mis-entered into the system, missing billing months, etc.).

19.2. How do these uncertainties affect the accuracy of the reported data in percentage terms or an estimated standard deviation?

Discrepancies in the utility usage data likely have a minimal impact on the magnitude of Sun's estimated GHG emissions.

19.3. Does your company report GHG emissions under any mandatory or voluntary scheme (other than CDP) that requires an accuracy assessment?

Yes (Please answer the following questions - 19.3.1, 19.3.2).

19.3.1 Please provide the name of the scheme.

Other

Working with the EPA Climate Leaders program, our company is developing an updated corporate GHG emissions Inventory Management Plan (IMP). The IMP includes all institutional, managerial, and technical arrangements made for the collection of data, preparation of the inventory, and implementation of steps to manage the quality of the inventory. An IMP provides a systematic process for ensuring data quality, and identifies areas where investments will likely lead to the greatest improvement in overall inventory quality. The primary objective of an IMP is ensuring the credibility of a company's GHG inventory information.

19.3.2. Please provide the accuracy assessment for GHG emissions reported under that scheme for the last report delivered.

Further information

20. Energy and Fuel Requirements and Costs: (New for CDP 2009)

Please provide the following information for the reporting year:

Cost of purchased energy

20.1. The total cost of electricity, heat, steam and cooling purchased by your company.

49915588

Select currency

United States dollar

20.1.1. Please break down the costs by individual energy type.

Table 8 - The "Cost" column will not accept text. Please use whole numbers only.

| Energy type | Cost | Currency |
|-------------|----------|----------------------|
| Electricity | 46915588 | United States dollar |
| Heat | | United States dollar |
| Steam | | United States dollar |
| Cooling | | United States dollar |

Cost of purchased fuel

20.2. The total cost of fuel purchased by your company for mobile and stationary combustion.

2301471

Select currency

United States dollar

20.2.1. Please breakdown the costs by individual fuel type.

Table 9 - The cost column will not accept text. Please use whole numbers only.

| Mobile combustion fuels | Cost | Currency |
|-------------------------|------|----------|
| | | |

| Stationary combustion fuels | Cost | Currency |
|-----------------------------|---------|----------------------|
| Natural gas | 2301471 | United States dollar |

Energy and fuel inputs

The following questions are designed to establish your company's requirements for energy and fuel (inputs). Please note that MWh is our preferred unit for answers as this helps with comparability and analysis. Although it is usually associated with electricity, it can equally be used to represent the energy content of fuels (see CDP 2009 Reporting Guidance for further information on conversions to MWh).

Purchased energy input

20.3 Your company's total consumption of purchased energy in MWh.

Please use whole numbers only.

439181 MWh

Purchased and self produced fuel input

20.4. Your company's total consumption in MWh of fuels for stationary combustion only. This includes purchased fuels, as well as biomass and self-produced fuels where relevant.

Please use whole numbers only.

44221 MWh

In answering this question and the one below, you will have used either Higher Heating Values (also known as Gross Calorific Values) or Lower Heating Values (also known as Net Calorific Values).

Please state which you have used in calculating your answers.

Higher heating values.

20.4.1. Please break down the total consumption of fuels reported in answer to question 20.4 by individual fuel type in MWh.

Table 10 - Please use whole numbers only

| Stationary combustion fuels | MWh |
|-----------------------------|-------|
| Natural gas | 44221 |

Energy output

In this question we ask for information about the energy in MWh generated by your company from the fuel that it uses. Comparing the energy contained in the fuel before combustion (question 20.4) with the energy available for use after combustion will give an indication of the efficiency of your combustion processes, taking your industry sector into account.

20.5. What is the total amount of energy generated in MWh from the fuels reported in question 20.4?

Please use whole numbers only.

20.6. What is the total amount in MWh of renewable energy, excluding biomass, that is self-generated by your company?

Please use whole numbers only.

Energy exports

This question is for companies that export energy that is surplus to their requirements. For example, a company may use electricity from a combined heat and power plant but export the heat to another organisation.

20.7. What percentage of the energy reported in response to question 20.5 is exported/sold by your company to the grid or to third parties?

Please use whole numbers only.

20.8. What percentage of the renewable energy reported in response to question 20.6 is exported/sold by your company to the grid or to third parties?

Please use whole numbers only.

Further information

21. EU Emissions Trading Scheme: (CDP6 Q2(g)(i) – New wording for CDP 2009)

Electric utilities should report allowances and emissions using the table in question EU5.

21.1. Does your company operate or have ownership of facilities covered by the EU Emissions Trading Scheme (EU ETS)?

[No \(Please go to question 22.\)](#)

Please give details of:

21.2. The allowances allocated for free for each year of Phase II for facilities which you operate or own. (Even if you do not wholly own facilities, please give the full number of allowances).

Table 11 - Please use whole numbers only.

| | 2008 | 2009 | 2010 | 2011 | 2012 |
|--|------|------|------|------|------|
| Free allowances metric tonnes CO2 | | | | | |

21.3. The total allowances purchased through national auctioning processes for the period 1 January 2008 to 31 December 2008 for facilities that you operate or own. (Even if you do not wholly own facilities, please give the total allowances purchased through auctions by the facilities for this period).

Total allowances purchased through auction

21.4. The total CO₂ emissions for 1 January 2008 to 31 December 2008 for facilities which you operate or own. (Even if you do not wholly own facilities, please give the total emissions for this period.)

Total emissions in metric tonnes

Further information

22. Emissions Trading: (CDP6 Q2(g)(ii) - New wording for CDP 2009)

Electric utilities should read EU6 before answering these questions.

22.1. Please provide details of any emissions trading schemes, other than the EU ETS, in which your company already participates or is likely to participate within the next two years.

[We do not participate or anticipate participating in any trading schemes within the next two years. \(Please go to question 22.3\)](#)

22.2. What is your overall strategy for complying with any schemes in which you are required or have elected to participate, including the EU ETS?

Further information

22. Carbon credits

22.3. Have you purchased any project-based carbon credits?

[No. \(Please go to question 22.5\)](#)

Please indicate whether the credits are to meet one or more of the following commitments:

Please also:

22.4 Provide details including the type of unit, volume and vintage purchased and the standard/scheme against which the credits have been verified, issued and retired (where applicable).

22.5. Have you been involved in the origination of project-based carbon credits?

[No. \(Please go to question 22.7\)](#)

22.6. Please provide details including:

- Your role in the project(s),
- The locations and technologies involved,
- The standard/scheme under which the projects are being/have been developed,
- Whether emissions reductions have been validated or verified,
- The annual volumes of generated/projected carbon credits,
- Retirement method if used for own compliance or offsetting.

22.7. Are you involved in the trading of allowances under the EU ETS and/or project-based carbon credits as a separate business activity, or in direct support of a business activity such as investment fund management or the provision of offsetting services?

[No. \(Please go to question 23\)](#)

22.8. Please provide details of the role performed.

Further information

Performance

23. Reduction plans & goals: (CDP6 Q3(a))

23.1. Does your company have a GHG emissions and/or energy reduction plan in place?

[Yes. \(Please go to question 23.3\)](#)

23.2. Please explain why.

It would aid automated analysis of responses if you could select a response from the options below as well as using the text box. However, please just use the text box provided if the options are not appropriate.

If the menu options above are not appropriate, please answer the question using the text box below:

Goal setting

23.3. Do you have an emissions and/or energy reduction target(s)?

Yes. (Please answer the following questions)

23.4 What is the baseline year for the target(s)?

Base year for GHG reduction target is calendar 2007. Energy reduction targets are set annually using the previous year as the baseline.

23.5. What is the emissions and/or energy reduction target(s)?

Sun has committed to reduce GHG emissions from worldwide operations 20% over 2007 levels by 2015.

Energy reduction target is currently 3% global energy use reduction between fiscal 2009 and 2010.

23.6. What are the sources or activities to which the target(s) applies?

Our GHG reduction target includes Scope 1 and 2 emissions from facilities over which Sun has operational control.

23.7. Over what period/timescale does the target(s) extend?

2007 - 2015

Further information

23. GHG emissions and energy reduction activities

23.8. What activities are you undertaking or planning to undertake to reduce your emissions/energy use?

Expansive telework program, which leads to reduction in corporate real estate portfolio and associated energy use.

Building retro-commissioning and efficiency projects.

Consolidation and optimization of IT infrastructure.

Further information

23. Goal evaluation

23.9. What benchmarks or key performance indicators do you use to assess progress against the emissions/energy reduction goals you have set?

Energy use, both direct combustion and electricity purchases are the two primary metrics used to track progress towards our GHG reduction goal.

Further information

23. Goal achievement

23.10. What emissions reductions, energy savings and associated cost savings have been achieved to date as a result of the plan and/or the activities described above? Please state the methodology and data sources you have used for calculating these reductions and savings.

Sun achieved a 23% reduction in Scope 1 and 2 emissions for our US facilities between 2002 and 2007, five years before the target attainment year of 2012.

23.11. What investment has been required to achieve the emissions reductions and energy savings targets or to carry out the activities listed in response to question 23.8 and over what period was that investment made?

Table 13 - The "Investment number" column will not accept text. Please use whole numbers only.

| Emission reduction target/energy saving target or activity | Investment number | Investment currency | Timescale |
|--|-------------------|---------------------|-----------|
|--|-------------------|---------------------|-----------|

Further information

23. Goal planning & investment

Electric utilities should read the table in question EU3 for giving details of forecasted emissions.

23.12. What investment will be required to achieve the future targets set out in your reduction plan or to carry out the activities listed in response to question 23.8 above and over what period do you expect payback of that investment?

Table 14 - The "Number" column will not accept text. Please use whole numbers only.

| Plan or action | Investment number | Investment currency | Payback |
|----------------|-------------------|---------------------|---------|
|----------------|-------------------|---------------------|---------|

23.13. Please estimate your company's future Scope 1 and Scope 2 emissions for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

If possible, please use table 15 below to structure your answer to the question or alternatively use the text box below.

Sun is targeting a minimum 3% annual reduction in GHG emissions, year-over-year between 2007 and 2015, and has aligned energy use reduction goals to this target.

Scope 1 forecasted emissions in Table 15 below are in the following units.

Scope 2 forecasted emissions in Table 15 below are in the following units.

Table 15 - The "Scope" columns will not accept text. Please use whole numbers only.

Type in the name of the territory or region for which you are giving data and then press "Add Territory/Region". If giving a global figure instead of separate figures for regions or territories, please write "global" in the box labelled "Enter name of territory or region".

[Click here to see a sample table.](#)

| Future reporting years: | | | | | | | | | | |
|----------------------------------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|
| End date for year end DD/MM/YYYY | 31/12/2009 | | 31/12/2010 | | 31/12/2011 | | 31/12/2012 | | 31/12/2013 | |
| Emission forecasts | Scope 1 | Scope 2 | Scope 1 | Scope 2 | Scope 1 | Scope 2 | Scope 1 | Scope 2 | Scope 1 | Scope 2 |
| Sun Global Operations | 9779 | 239896 | 9537 | 232699 | 9301 | 225718 | 9072 | 218947 | 8851 | 212378 |

23.14. Please estimate your company's future energy use for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

If possible, please use table 16 below to structure your answer to the question or alternatively use the text box below.

Table 16 - Please use whole numbers only.

Type in the name of the territory or region for which you are giving data and a description of the data you are giving e.g. electricity consumption. Then press "Add Row". If giving a global figure instead of separate figures for regions or territories, please use the word "global". This table will also accept different types of units e.g. units of volume or mass.

[Click here to see a sample table.](#)

| Future reporting years: | | | | | | | | | | |
|---|------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|
| End date for year end DD/MM/YYYY | 31/12/2009 | | 31/12/2010 | | 31/12/2011 | | 31/12/2012 | | 31/12/2013 | |
| Energy use estimates for territory/region | Number | Units | Number | Units | Number | Units | Number | Units | Number | Units |
| Sun Global Operations | 495845 | MWh | 480970 | MWh | 466541 | MWh | 452544 | MWh | 438968 | MWh |

23.15. Please explain the methodology used for your estimations and any assumptions made.

Sun is targeting a minimum 2% reduction in global energy use per year in order to meet our goal of a 20% reduction in global Scope 1 & 2 emissions over 2008 levels by 2015. Energy values in 23.14 are combined electricity use and combustion of natural gas.

Further information

24. Planning: (CDP6 Q3(c))

24.1. How do you factor the cost of future emissions into capital expenditures and what impact have those estimated costs had on your investment decisions?

Sun is not a large-scale GHG emitter by current and proposed regulatory standards, so we do not currently consider the cost of future emissions into investment decisions..

Further information

Governance

25. Responsibility: (CDP6 Q4(a))

25.1. Does a Board Committee or other executive body have overall responsibility for climate change?

No. (Please answer 25.2 and then go to question 26)

25.2 Please state how overall responsibility for climate change is managed and indicate the highest level within your company with responsibility for climate change.

The Corporate Sustainability office under the direction of the Chief Sustainability Officer has overall responsibility for Sun's response to climate change. The CSO reports directly to Sun's President.

25.3. Which Board Committee or executive body has overall responsibility for climate change?

25.4. What is the mechanism by which the Board or other executive body reviews the company's progress and status regarding climate change?

Further information

26. Individual Performance: (CDP6 Q4(b))

26.1. Do you provide incentives for individual management of climate change issues including attainment of GHG targets?

No. (Please go to question 27.1)

26.2. Are those incentives linked to monetary rewards?

26.3. Who is entitled to benefit from those incentives?

Further information

27. Communications: (CDP6 Q4(c))

27.1. Do you publish information about the risks and opportunities presented to your company by climate change, details of your emissions and plans to reduce emissions?

Yes. Sun's responses to both the CDP general (<http://cdproject.net/responding-companies.asp>) and SCLC (<http://cdproject.net/sc-results-08.asp>) CDP surveys are publicly available on the CDP website.

Details regarding Sun's public commitment to reduce GHG emissions is posted on the EPA Climate Leaders website (<http://www.epa.gov/climateleaders/partners/partners/sunmicrosystemsinc.html>).

If so, please indicate which of the following apply and provide details and/or a link to the documents or a copy of the relevant excerpt:

27.2. The company's Annual Report or other mainstream filings.

No

27.3. Voluntary communications (other than to CDP) such as Corporate Social Responsibility reporting.

Yes

Sun's most recent CSR report can be found at <http://www.sun.com/aboutsun/csr/report2008/>. The report for fiscal 2009 is scheduled to be complete in October 2009.

Further information

28. Public Policy: (CDP6 Q4(d))

28.1. Do you engage with policymakers on possible responses to climate change including taxation, regulation and carbon trading?

Yes

Sun is a founding member of Business for Innovative Climate and Energy Policy (BICEP). BICEP's goal is to work directly with key allies in the business community and with members of the US Congress to pass meaningful energy and climate change legislation that is consistent with nine core principles:

Set short- and long-term greenhouse gas reduction targets

Stimulate green job growth

Adopt national renewable portfolio standard

Capture vast energy efficiency opportunities

Boost investment in renewable energy, energy efficiency and carbon capture and storage technologies

Establish cap-and-trade system with 100% auction of carbon allowances

Encourage transportation for clean energy economy

Limit construction of new coal plants to those that capture and store CO2

Assist developing countries in adapting to climate change and reducing carbon emissions

Sun recently worked with US Representative Anna Eshoo's office to craft two amendments to the proposed Waxman/Markey climate change bill. One was an amendment to insert a date into the data centers provision enacted in 2007 that instructed DOE and EPA to designate an information technology industry organization (Green Grid) with whom to consult and coordinate. The other was an amendment on Federal CIO accountability for energy costs.

Sun has been actively involved in working with the U.S. Environmental Protection Agency on an ENERGY STAR specification for energy-efficient computers. Version 1.1 of this specification has been released for review and comment. Sun expects to continue our involvement with future versions of this specification.

{something here about the EU meeting with Commissioner dimas cabinet? How about the corporate leaders group?}

H.R. 5646 — Energy Use and Datacenters

Sun joined forces with AMD, Intel, HP, and Dell to support a bill in the U.S. Congress (H.R. 5646) calling on the EPA to conduct a study on the impact of increased energy use in servers and datacenters. The bill was passed in the U.S. House of Representatives by an overwhelming margin of 417 to 4, and was passed in the U.S. Senate by unanimous consent.

As part of Sun's commitment to sustainability, we work with our stakeholders around the world on issues related to energy efficiency, sustainable computing, and a range of green business practices necessary to protect our planet. Given the high environmental standards we have set for ourselves — in both the products we develop and through our internal practices — Sun is challenging governments and businesses to do the same. This means looking beyond simple compliance for opportunities to advance stronger environmental practices.

Further information

Supplier Module

SM 1 Ability to Split Scope 1 and 2 Emissions by Business Category

The aim of these questions is to help your customers estimate the extent to which your Scope 1 and Scope 2 emissions are linked with their purchases of services or goods from you.

Please note that we use the term "product" to cover both goods and services.

SM 1.1 Are you able to break down your total Scope 1 and Scope 2 emissions by the following categories:

- Business division
- Business unit
- Factory
- Product group
- Other

Please give details in each case.

Business division?

No

Business unit?

No

Factory?

No

Product group?

No

Other

No

Unable to breakdown by category?

Yes (Please go to question SM 1.4)

Further information

Sun's inventory can be reported by country (and are broken down that way in this CDP response) or by sales geography (e.g. EMEA, APAC, etc.). These divisions do not, however, correspond to any particular product line or business unit.

SM 1.2 Splitting Scope 1 and Scope 2 Emissions by Category

SM 1.2. Using your preferred method (question SM 1.1) for splitting emissions, please consider what are the five biggest emitting categories (e.g. business units or product groups) for your company? For each of the five biggest emitting categories, plus any other categories specified by your customer(s), please complete the table SM1.2.

[Click here to see a sample of a completed table.](#)

Please complete this table. Use the figure given in answer to question 11.1. as the basis for your Scope 2 emissions.

| | Category e.g. business division, business unit, factory, product group. | Total emissions (number) | Total emissions Units of measure e.g. metric tonnes CO2-e | Do these represent emissions from Scope 1 only, Scope 2 only, or both? | Output | Units | Major emission Sources |
|--------------|--|-----------------------------|--|---|--------|-------|---|
| Group 1 | United States | 1856290 | metric tonnes CO2e | Scope 1 and 2 | | | electricity purchases, natural gas combustion |
| Group 2 | United Kingdom | 14737 | metric tonnes CO2e | Scope 1 and 2 | | | electricity purchases, natural gas combustion |
| Group 3 | India | 11790 | metric tonnes CO2e | Scope 2 | | | electricity purchases |
| Group 4 | Germany | 4426 | metric tonnes CO2e | Scope 1 and 2 | | | electricity purchases, natural gas combustion |
| Group 5 | Australia | 5146 | metric tonnes CO2e | Scope 2 | | | electricity purchases |
| Other | Singapore | 4737 | metric tonnes CO2e | Scope 2 | | | electricity purchases |
| Total | | 226456 | metric tonnes CO2e | | | | |

Further information

SM 1.3 Methodology

SM 1.3. Please explain how you have identified the GHG sources listed in the previous question, including major limitations to this process and assumptions made.

Describe your system for allocating emissions to the groups in the table.

Where published information has been used, please provide a reference(s).

Give the degree of confidence that you have in the figures expressed as a percentage, e.g. you estimate that they are accurate to +/- 15%.

If the allocation of emissions to different categories has been externally verified, please give details.

The sources included in Question 1.2 are those facilities and operations over which Sun has operational control. The majority of the GHG emissions reported are the result of energy use (electricity and natural gas) in our buildings, and all buildings for which Sun receives utility billings are included in emissions estimates.

Emissions are allocated by country based on utility billings. All other minor sources accounted for are included in country totals for the United States.

Further information

SM 1.4 Challenges and Developments

What are the challenges in allocating emissions to different business categories and what would help you to overcome these challenges? Please describe whether and how you plan to develop your capabilities to allocate your emissions in the future.

As noted above, Sun's operations are spread across 50 countries around the world. Our workforce is highly mobile and more than half work from a location other than a Sun facility (e.g. home, satellite office, etc.). Nearly all of our Scope 1 and 2 emissions are associated with the buildings we operate, but no product group, business unit, or other company division is located in a particular location. This makes a meaningful allocation of emissions by business category essentially impossible.

Further information

SM 2. Your engagement with your suppliers

Your customers want to engage with you to learn more about the emissions from their immediate suppliers. The purpose of this section is to find out what you in turn are doing to engage with your own suppliers.

SM 2.1 Do you have a strategy for engaging with your suppliers on their GHG emissions and the impacts of climate change on their business? If so, please provide details of this strategy. To give a sense of the scale of this engagement, please include the number of suppliers with whom you are engaging and the proportion of your total spending that they represent.

If you do not have a strategy, please explain any plans you have to develop one in the future.

Yes

Sun is currently participating in an Electronics Industry Citizenship Coalition (EICC) initiative to help our suppliers quantify and report GHG emissions based on the globally-accepted Corporate Accounting Standard. We believe this will help identify opportunities to increase the energy efficiency and lower the GHG emissions associated with manufacturing our products. All top tier suppliers, plus selected secondary suppliers (~ 60 total) are being asked to submit energy use and GHG estimates for their operations and, if possible, at the facility level. This sample group represents more than 90% of Sun's total annual direct supplier spend.

Further information

SM 2.2 Use of data

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data (for example: identifying major GHG sources to prioritise emissions reduction actions, identifying physical risks in the supply chain, stimulating innovation, etc).

Sun has just commenced our first request for GHG emissions data from our suppliers. Our priority after receiving those results will be to work with suppliers who require additional help in establishing GHG reporting capabilities. Those suppliers who are already producing GHG estimates for their organization and/or facilities will be encouraged to set GHG reductions targets (if they have not done so), as well as report their emissions and organizational risks and opportunities from climate change to the Carbon Disclosure Project.

Further information

SM 3. Emissions over the lifecycle of goods and services

SM 3.1. Please list any major successes and/or planned activities to reduce GHG emissions in the lifecycle of groups of products or individual products, including an estimate of the possible reductions for each initiative.

Sun has had multiple major successes in the reduction of GHG emissions in the lifecycle of products:

- Development of energy efficient servers
- Development of power calculators to help customers estimate the power consumption of servers based on their specific configuration, allowing them to choose the lowest-power option.
- Tools to estimate power consumption and carbon emissions of both individual products, groups of products, specific data centers, and entire installed base
- Tools to help customers estimate GHG emissions associated with the use of a particular product.

The potential GHG emissions reductions from Sun's energy efficient servers is dependent upon their configuration and operating modes, so no specific estimates are provided here. For information, see http://www.sun.com/solutions/eco_innovation/index.jsp.

SM 3.2 Do you offer customers information or steps they can take to reduce the GHG emissions associated with use of your products, and - in the case of goods - with their disposal? Please give examples.

Sun's Data Center Efficiency Practice is focused on helping customers cut their energy bills and IT environmental impact, helping to transform their technology infrastructure into eco friendly datacenters. This simple three-step approach leads customers through Assessing, Optimizing and Virtualizing their infrastructure, using the proven, pre-packaged tools, solutions and methodologies we learned from the redesign of our own datacenters.

Further information

SM 3.3 and 3.4 Individual Request Questions

Some suppliers may have customers who request that they provide estimates of GHG emissions over a particular product's lifecycle. Others may have estimated this information for their own purposes and wish to publicise it. If you fall into either group, please answer the following question and then complete the table SM 3.4.

SM 3.3 Please give details of the method that you have used to estimate lifecycle emissions. State if you have followed a published procedure (e.g. ISO 14040 & 14044 or PAS 2050) or one that you have developed yourself.

Clearly define the good or service for which data is being given and the boundary of your assessment. Please make it clear which GHGs and GHG sources are included in your assessment. If relevant GHGs and GHG sources are excluded, please describe them and give reasons for omissions.

Give references to data sources used.

If you are giving life cycle assessment (LCA) information for more than one product, please use this text box to describe your methodologies, each time making it clear to which product you are referring.

Sun has done some preliminary modeling using both bottoms-up process-based analysis and tops-down EIO-based analysis, and believe that our systems are generally in the 0.2 to 1 metric ton CO2e per processor socket (i.e. a 4-socket system would be 4x these numbers) range. The range is due to the variability in configuration (how much memory, etc) and the current lack of precision in our analyses.

SM 3.4. Emissions over the lifecycle of goods and services

An example of the lifecycle stages of a service might be - in the case of a hotel stay - check in, use of room, check out, cleaning.

You can use this table to provide LCA data to all requesting CDP members or to selected members only.

In the box at the top you will see a list of all your requesting members. If you would like to limit the availability of this particular product information to a particular member, please select that member. To select multiple members, hold down the control key and click on each.

You can repeat this process as you move to the next table if you have data for more than one product to input.

If you do not select specific members, this data will be visible to all requesting members. If you choose to make your response public, it will then appear in your published response on our website.

Further information