

CDP 2009 Information Request

Respondent: Novo Nordisk

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.

Overseen by its Risk Management Board, representing senior managers from all parts of the company's value chain, Novo Nordisk has a systematic, integrated process to continually risk assess a wide range of potential issues. Enterprise risk management increases the company's ability to assess and understand risks separately and in relation to each other. Each quarter, all major business areas in the company are required to report to the Risk Office their most significant risks, along with plans or processes to manage these risks. The Risk Office challenges business areas about reported risks and encourages exploration of longer-term concerns. Reported risks are then consolidated into a ranking and assessment of the company's key risks. This information is presented to the Risk Management Board, who challenges the overall risk and control profile of Novo Nordisk.

The process is linked to the strategic planning process and considers both financial and non-financial risks ie climate change. All assessments of risk take into account the likelihood of an event and its potential impact on the business. Impacts are quantified and assessed in terms of potential financial loss and reputational damage. Risks are assessed based both on the assumption that no mitigating actions will be implemented and at the net risk level, taking into account mitigating actions and their anticipated effect. Currently, the risk assessment by Novo Nordisk of climate change is linked to regulatory risks and associated financial implications. These are however not judged to be significant.

In a global context and compared to the sector average (CDP6: sector average emissions intensity 245 tCO₂e/\$m revenue vs. Novo Nordisk's 28 tCO₂e/\$m revenue), Novo Nordisk is not an energy intensive company. However, Novo Nordisk's production processes are energy intensive and Novo Nordisk is one of the largest energy consumers in Denmark. In general, the pharmaceutical sector is not regarded as a energy intensive sector.

Novo Nordisk is exposed to regulatory risks in three ways:

- 1) The EU ETS
- 2) National green taxes
- 3) New nation and international regulation/agreements.

There have been no major changes in our views on the materiality of these risks during 2008. However, we expect that the changes in the Danish taxation, the development of the EU ETS revision and the final agreement at the COP15 will affect the materiality of the regulatory risks in 2009.

The regulatory risks have been explained in detail below.

Re 1) EU ETS

At Novo Nordisk, climate change is regarded as a material issue given the magnitude, scale of the issue and its potential impact. As a company relying on energy intensive production and being committed to conducting its operations responsibly, Novo Nordisk believe that it is essential to take active steps to reduce our carbon footprint. The introduction of EU ETS in 2005 meant that companies had to frame appropriate strategies to be in compliance with European/national legislation. Novo Nordisk's management has decided to go beyond compliance on this issue and be proactive in reducing CO₂ emissions. A proactive approach is expected to strengthen Novo Nordisk's internal focus on energy management and support the implementation of cost effective energy efficiency projects.

Novo Nordisk only has two production sites (Bagsvaerd and Hilleroed in Denmark) where CO₂ allowances under the EU emission trading scheme have been allocated. During the first ETS period (2005-2007), Novo Nordisk surplus allowances corresponding to approximately 20,000 tons. However, during the next ETS period (2008-2012) our quotas were cut by 10% at these two sites. The impact is rather minimal given that only 12% of our global emissions are covered under the EU ETS. Due to our energy saving efforts, Novo Nordisk expects to be able to "break even" with the supplied quotas at the two sites in the current ETS period.

Even though Novo Nordisk's CO₂ allowances under the EU emission trading scheme are insignificant compared to many other industries, we are following the discussions in EU on the proposed changes to the EU ETS by 2012. Especially we are aware of the benchmark discussions and how this will affect us directly on our own allowances and potentially more significantly indirectly through the energy producers from which we buy energy.

Re 2) National green taxes

As 75% (2008 data) of Novo Nordisk's energy consumption is consumed at Novo Nordisk's production facilities in Denmark (85% of Novo Nordisk's CO₂ emissions are emitted from Novo Nordisk's production facilities in Denmark), Novo Nordisk are affected by changes in the Danish tax-system when amongst other these are related to energy taxes. The Danish authorities have recently redesigned the tax-system and as part of this change increased the taxes on energy (green taxes).

Novo Nordisk has estimated the effect of these changes and with a worst case scenario calculation, it is estimated that the increase in taxes on energy will have full effect on Novo Nordisk in 2013. However the effect will not be material, as the positive effect of the 10% absolute reduction target of CO₂ emissions and thereby decreased energy consumption, will secure that the increase in green taxes will be insignificant.

Re 3) New national and international regulation/agreements

Under our climate strategy, Novo Nordisk is actively pursuing energy efficiency opportunities at our production sites globally, which also mean that Novo Nordisk is better prepared to meet future regulatory demands.

Novo Nordisk is monitoring whether and how changes in leadership and international agreements could potentially affect the global regulatory environment for Novo Nordisk. Most significant trends are:

- Legislation in the US as a consequence of the new government
- COP15 agreement
- EU ETS revision in 2012
- Transportation as a general issue we expect to be indirectly impacted by through prices from our transporters.

None of Novo Nordisk's end-users (patients/consumers) have raised expectations that they expect Novo Nordisk to reduce our CO₂ emissions. There is however a general expectation from our stakeholders that Novo Nordisk also takes leadership within this agenda, and show that it is possible to make a profit while taking social responsibility.

Further information

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

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

We do not consider our company to be exposed to physical risks.

Novo Nordisk's views have not changed in the past twelve months.

Further information

Novo Nordisk operations were not affected by extreme weather events, changes in weather patterns and other related phenomena in 2008. Novo Nordisk has made a global review of our production sites whether they would expect to be exposed to physical risks from climate change. Even though, Novo Nordisk still find it rather difficult to predict exactly whether our operations in the future will be affected by impacts of climate change, our review showed that there are no material physical risks from climate change to our production sites. Two of our production plants are located in areas of water scarcity; Montes Claros, Brazil and Tianjin, China. Initiatives are being taken to protect water resources in the area and secure water supply. One such initiative has been taken in connection with the projecting of the new production facility in Tianjin. This has been designed with the condition that it should be 20% more water efficient than the newest similar production facility. The financial implications of this has been insignificant and approved as part of the design of the production facility.

As it is well recognised that climate change potentially can lead to an increase in the risk of disruptions in the supply chain and availability of raw materials, we will review our supply chain in order to establish whether we potentially could be affected by disruptions. We expect that this review will be conducted in 2010. This to ensure that we secure we can deliver the needed pharmaceutical products to people around the world.

When a new production sites is planned a thorough due diligence process is conducted. This process includes the future availability of energy and water in the reviewed area. When a production site is agreed, this will be covered by an ISO14001 management system and regular reviews of the environmental performance including the availability of energy and water will be made. As an example, the availability of water at the production site in Kalundborg has been restricted and as part of the continuity plans, additional focus on reducing water consumption and thereby also the discharge of waste water has been increased.

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.

Novo Nordisk's views on risks have not changed in the past twelve months.

Further information

In general, it can be argued that not acting upon Novo Nordisk's responsibility towards reducing our impact on climate, would threaten our license to operate. This applies in terms of:

1) securing a lean manufacturing company which secures our life-saving products to people around the world

With the indicated expected increase of people with diabetes to 380 million people in 2025 (IDF), Novo Nordisk has an obligation to secure a lean manufacturing company which be part of securing life-saving products.

2) in terms of being an active world citizen applying the precautionary principle by acting before knowing the full consequences of the changes

The precautionary approach formed the basis for a review of Novo Nordisk most material environmental impacts which was conducted in 2003. The review showed that climate change was a material issue Novo Nordisk would have to deal with in order to maintain our license to operate. In 2003, this was not the general opinion.

3) maintaining a good reputation in order to attract and retain investors and employees.

Novo Nordisk measures the reputation of Novo Nordisk on many different parameters using a Reputation Tracker developed by the Reputation Institute. The annual performance of Novo Nordisk reputation is included in Novo Nordisk Annual Report 2008 page 96. The goal of Novo Nordisk is to improve (or maintain) the company reputation as measured by the mean brand score or at least be the leader in seven out of eight target groups. In 2008, this goal was achieved despite a slight decrease of the mean brand score of 1.6 from 74.0 to 72.4, because the company is leading in seven out of eight target groups. This confirms the leadership position in diabetes in the four core markets (China, Germany, UK and US).

As something new, Novo Nordisk has in 2008, developed a similar tool to measure how the reputation of Novo Nordisk attracts and retains employees.

The feedback from investors is gain through the annual SRI investor road shows.

http://cdp.cdproject.net/attachedfiles/Responses/53638/8269/Novo_Nordisk_UK_2008.pdf

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.

Novo Nordisk's views on opportunities have not changed in the past twelve months.

Further information

Novo Nordisk has been working with energy efficiency for more than ten years. The adoption of our climate change strategy has reinforced our commitment to energy management. Novo Nordisk core production technology is based on microbial fermentation using genetically modified organisms. Novo Nordisk researchers are constantly seeking to identify and develop better microbial strains that result in more yield per cell. Novo Nordisk has developed a new microbial strain that will produce five times more yield per cell compared to the existing production process. Novo Nordisk is also integrating energy assessments into our design and development process to ensure that our future processes and products utilise less energy.

The climate strategy has three elements:

1. cLEAN®
2. energy savings initiatives, and

3. more use of renewable energy.

Novo Nordisk is looking into opportunities such as windmills, solar power and geothermal energy. The ongoing cLEAN® programme – an adapted LEAN manufacturing programme to increase productivity – in Product Supply underpins the climate strategy and will contribute to lowering the level of CO2 emissions. As a result of this programme Novo Nordisk will achieve lower energy consumption per produced unit. Novo Nordisk expects 2/3 of the energy savings to come as a result of process optimisations by increasing the yield per cell.

Novo Nordisk does not intend to develop specialised products in response to climate change but will ensure that energy issues are actively integrated into the development and design of future products and processes.

With the current initiatives Novo Nordisk has taken, Novo Nordisk is anticipating this proactive approach will deal with the current expected future legal requirements and thereby turning these into opportunities before they are made legal requirements.

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

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

Physical changes do not present opportunities for my company.

Novo Nordisk's views have not changed in the past twelve months.

Further information

There are no current or anticipated physical changes which will offer opportunities that will affect Novo Nordisk directly.

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.

Novo Nordisk's views on opportunities have not changed in the past twelve months.

Further information

The climate actions implemented prepare our business for a carbon-constrained future and build our leadership brand and our reputation as a trusted and innovative partner. The climate actions create a lean company based on the right values and this can be used in the sales proposition by Novo Nordisk's sales representatives.

Novo Nordisk follows research on climate and health closely. Within Novo Nordisk's current business areas diabetes, haemophilia and hormone replacement therapy, climate change does not offer specific business opportunities, but we are currently investigating the links between climate change and diabetes type 2. Both are to a large extent caused by Western lifestyle – urbanisation, excessive consumption, poor diets and physical inactivity. On a longer term, this link could prove to be a business area for Novo Nordisk. We are also aware that new business opportunities could arise outside our current portfolio/pipeline.

As the demand for healthcare continues to grow (diabetes estimates predicts 380 mill people with diabetes in 2025) ie people are living longer, the global population is growing and new economies are emerging and despite the significant advances in healthcare in recent decades, many diseases remain under-diagnosed or not well treated, or there is not yet an effective therapy. These facts offer opportunities for our business in terms of increased sales. Whether the physical changes and migration of population caused by climate change will affect the living patterns and public health care budgets in a positive or negative way is still to be seen.

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 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

Financial accounting year: 01 January 2008

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 financial control is exercised – per consolidated audited Financial Statements.

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

Novo Nordisk annual reports cover the financial and non-financial performance in a given calendar year from 1 January to 31 December.

Novo Nordisk has for the last five years published an integrated annual report, which shows the way Novo Nordisk has integrated the TBL in our business and how the integrated approach is framing Novo Nordisk future strategies. This is consistent with the articles of association, in which it is described how Novo Nordisk must conduct its business according to the triple bottom line. The Novo Nordisk Annual Report 2008 has been attached for reference. Historic CO2 emissions are reported from 2003 to 2008 following the financial year, which is the same as the calendar year.

Accounting policies for the non-financial data in the annual report are based on data for Novo Nordisk A/S, including NNIT A/S, NNE Pharmaplan A/S and subsidiaries. Environmental data covers the significant environmental impact of the organisation's activities at the production sites, which produce approved products for the market – 14 in total. One production site was added in 2008 – see above. Social data covers all employees. Economic data covers the Novo Nordisk Group. Engagements in joint ventures and contract licensees are not included in the report scope. However, data for animal testing includes testing taking place at contract research organisations

Emissions of CO2 from energy (total) are based on standard factors for fuel and for energy on a three-year average of available emission factors from the external suppliers of energy. Hence, emission factors for 2008 are the three-year average of 2005 to 2007. The emissions are calculated according to the GHG protocol.

Reference: Novo Nordisk Annual Report 2008 (p. 91).

Novo Nordisk use three-year averages due to two factors:

1. Emission factors for the previous calendar year are not available in January and therefore not available for calculation and inclusion of Novo Nordisk's CO2 emissions in Novo Nordisk's annual report, which is published the first Monday in February.
2. 85% of Novo Nordisk's CO2 emissions are emitted from our production activities in Denmark. The Danish emission factors are highly dependent on the energy production in Sweden. This again is dependent on the volume of rain any given year.

In order to deal with these two factors and limit their impact on Novo Nordisk's calculations of CO2 emissions,, it has been agreed with WWF that three-year averages are used ie the emission factors for 2008 are the three-year average of 2005 to 2007.

Within the reporting boundary of reporting on companies over which Novo Nordisk has financial control, sales affiliates are not included. Scope 1 and scope 2 emissions from these are insignificant. The sales affiliates are however the focus for the scope 3 initiatives.

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.

Novo Nordisk has entered into an agreement with WWF to reduce its CO2 emissions so that the CO2 emission in 2014 will be 10% below the 2004 level, measured in absolute terms. The scope of the target is emissions from activities at our production sites worldwide (ie energy consumption related to production and other activities such as R&D and administration at the specific geographical production site). The scope is the same as the reporting of energy consumption and emissions in our annual reporting. The WWF Climate Savers agreement requires us to report greenhouse gas emissions in accordance with the Greenhouse Gas Protocol, which is a corporate accounting and reporting standard for greenhouse gas emissions.

WWF and Novo Nordisk had a CO2 inventory (ie quantified list of Novo Nordisk greenhouse gas emissions and sources) workshop on 16 February 2005. During the workshop, WWF representatives and Ecofys discussed discrepancies in Novo Nordisk inventory against the greenhouse gas protocol.

Key definitions

Direct emissions

Emissions from sources owned or controlled by the company (on-site). These are also referred to as Scope 1 emissions.

Indirect emissions

Emissions that are related to energy produced and supplied to Novo Nordisk by an external supplier. For example, emissions associated with the generation of electricity, district heat and steam purchased externally for own consumption. It is also referred to as scope 2 emissions.

Target base year

The base year used for defining the CO2 target. The target base year could be a specific year or an average of multiple years. 2004 is the base year for Novo Nordisk.

Calculating CO2 emissions

Calculation of emissions are based on energy consumption reported by all sites each quarter to our central data system "CATCH" and emission factors as explained below. Novo Nordisk bases the emission calculation on the principles of the Green House Gas Protocol and as agreed with WWF.

Calculation of emissions from Scope 1

Calculating direct emissions is based on fuel consumption (Scope 1 emissions). For Novo Nordisk's own production of steam and heat, Novo Nordisk uses natural gas or biomass. Small amounts of oil are used as back up. Only our small packaging plant in Koriyama, Japan, uses oil (kerosene) as their main fuel supply. The calculation of emissions follows the principles:

- Actual consumption of the fuel during the year will be used for the calculations rather than fuel amounts purchased (the purchased amount may differ from the actual consumption if part of the purchase is put in stocks).
- The lower heating value of the fuel is used when converting the consumption of fuel measured in cubic meter (m3) into the actual energy consumption in Giga Joules (GJ).

The following hierarchy of sources of emission factors is applied:

- First preference; emission factors and lower heating values from fuel suppliers
- Second preference; emission factors and lower heating values from official national source (also used for national inventory) eg the Danish Energy Agency in Denmark (www.ens.dk) or www.Energinet.dk assuming 100% oxidation
- Last preference; default emission factors and lower heating values of the GHG Protocol Initiative (www.ghgprotocol.org).

All historical direct emissions have been recalculated using consistent standard emission factors according to the hierarchy of preferences given above. Given that especially the electricity factors in Denmark varies year on year, Novo Nordisk uses three year averages for all emission factors (fuel and electricity). Lower heating values: Novo Nordisk will use the annual average of previous year's value from the different suppliers to convert from amount of fuel to GJ.

Emission from our processes

Novo Nordisk currently does not account for greenhouse gas emissions from its specific processes because our key production process (fermentation) is based on agricultural products and henceforth Novo Nordisk consider emissions from this process neutral in relation to global warming - the yeast consumes the agricultural products in their respiration processes and generates CO2, accumulated in the agricultural products from the the photosynthesis process (ie CO2 emissions from fermentation are not included in the Novo Nordisk CO2 inventory).

Calculating Indirect emissions (Scope 2 emissions)

Calculation of CO2 emissions from production of externally supplied energy (electricity, district heat and steam) is based on key factors from our suppliers. Due to large variations year on year, it was agreed with WWF to base the emission data on three year averages. Novo Nordisk has recalculated its reported historical emissions accordingly. Grid, distribution and transmission losses are not taken into account in the calculations, as Novo Nordisk does not own or control the transmission or distribution system (cf. GHG Protocol Chapter 4).

Select methodologies:

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

Please also provide:

9.2 Details of any assumptions made.

The emissions are based on the GHG protocol. For Novo Nordisk's sites in China it has not been possible to get emission factors for the steam supply from the coal fired power plants. It has therefore been agreed with WWF to use an assumed emission factor. The factor is based on the emission factors from a similar coal fired power plant in Denmark, but less efficient. The factor is 90 kg/GJ.

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

1. GHG Protocol - www.ghgprotocol.org

2. Energinet.dk -

<http://www.energinet.dk/en/menu/Climate+and+the+environment/Environmental+impact+statements+for+electricity/Environmental+impact+statements+for+electricity.htm>

Select calculation tools:

We use simple spread sheets calculating the emissions from amount of fuel, lower heating value multiplied with the emission factor. The factors are collected from the suppliers as first priority. Electricity is grid factors where ever available from the supplier. In China and Algeria, we use the factors in the latest GHG tool – latest version is Version from Mach 2008.

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

Novo Nordisk is counting CO2 emissions with the global warming potential 1:1 and emissions from coal plants we use GWP20. The emissions from coal plants are not included in the emission figures in this report. As from 2009 Novo Nordisk has set target for emission of CO2-e from use of coal plants. The target is 9,500 tons CO2-e (GWP20).

9.5 The emission factors you have applied and their origin.

The factors used are listed in the attached document. The origin is explained in the previous sections.

Further information

[http://cdp.cdproject.net/attachedfiles/Responses/53638/8138/9.5_The emission factors you have applied and their origin.doc](http://cdp.cdproject.net/attachedfiles/Responses/53638/8138/9.5_The%20emission%20factors%20you%20have%20applied%20and%20their%20origin.doc)

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	01/01/2006
Reporting year Q7.1 End date	31/12/2008	31/12/2007	31/12/2006
10.1 Total gross global Scope 1 GHG emissions in metric tonnes CO ₂ -e	43196	46320	48038
10.2 Gross Scope 1 emissions in metric tonnes CO₂-e by country or region			
Algeria	55		
Brazil	1826	2874	4306
China	39	21	6
Denmark	28264	30242	31407
France	6684	6876	6759
Japan	502	520	640
USA	5826	5787	4920

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 CO ₂ -e
Total gross global Scope 1 GHG emissions in metric tonnes CO₂-e - answer to question Q10.1	43196

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 CO₂-e - answer to question Q10.1	43196
Bagsvaerd, Denmark	11962
Chartres, France	6684
Clayton, North Carolina, USA	5826
Dely Brahim, Algeria	55
FeF Chemicals, Koege, Denmark	903
Gentofte, Denmark	4671
Hilleroed, Denmark	5032
Hjoerring, Denmark	378
Kalundborg, Denmark	0
Koriyama, Japan	502
Maaloev, Denmark	5175
Montes Claros, Brazil	1826
Tianjin, China	39
Vaerloese, Denmark	143

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	
CH ₄	Metric tonnes	
CH ₄	Metric tonnes CO ₂ -e	
N ₂ O	Metric tonnes	
N ₂ O	Metric tonnes CO ₂ -e	
HFCs	Metric tonnes	0
HFCs	Metric tonnes CO ₂ -e	1225
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.

Information has been provided in the above answers.

Further information

In 2008, the scope 1 GHG emissions related to Novo Nordisk's energy consumption at our production sites were 43.196 tons CO₂ (2007: 46.320 tons CO₂ – 2006: 48.038 tons CO₂).

In connection with the preparation of Novo Nordisk's response to the CDP7, we have become aware that we unfortunately have reported the scope 1 emissions as scope 2 and the scope 2 emissions as scope 1 in the CDP6. We have therefore added the 2006 and 2007 scope 1 and scope 2 emissions in the CDP7 for correct comparison. No data has been entered for the facility (production site) in Algeria for 2006 and 2007, as this was a new facility in 2008.

In Novo Nordisk Annual Report 2009, we will report on the CO₂ emissions related to the loss of cooling agents from refrigerants in stead of the number of accidental releases of cooling agents.

It will not give a better understanding of Novo Nordisk's CO₂ emissions to shown them broken down on business division, as there is no material difference between the business divisions in terms of CO₂ emissions.

Novo Nordisk defines a facility as a geographical area, where Novo Nordisk has production. At some of the production sites, other activities than production might take place. For example, the facility 'Bagsvaerd, Denmark' covers headquarter activities related to HR, R&D, finance etc.

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	01/01/2006
Reporting year Q7.1 End date	31/12/2008	31/12/2007	31/12/2006
11.1 Total gross global Scope 2 GHG emissions in metric tonnes CO ₂ -e	171531	189964	181259

11.2 Gross Scope 2 emissions in metric tonnes CO ₂ -e by country or region			
Algeria	181		
Brazil	0	0	0
China	2898	3350	3591
Denmark	153324	171339	164529
France	1218	1309	1402
Japan	1287	1161	1194
USA	12623	12804	10543

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 CO ₂ -e
Total gross global Scope 2 GHG emissions in metric tonnes CO₂-e - answer to question Q11.1	171531

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 CO ₂ -e
Total gross global Scope 2 GHG emissions in metric tonnes CO₂-e - answer to question Q11.1	171531
Bagsvaerd, Denmark	14300
Chartres, France	1218
Clayton, North Carolina, USA	12623
Dely Brahim, Algeria	181
FeF Chemicals, Koege, Denmark	1116
Gentofte, Denmark	15158
Hilleroed, Denmark	12864
Hjoerring, Denmark	2472
Kalundborg, Denmark	95650
Koriyama, Japan	1287
Maaloev, Denmark	11317
Montes Claros, Brazil	0
Tianjin, China	2898
Vaerloese, Denmark	448

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.

Information has been provided in the above answers.

Further information

In 2008, the scope 2 GHG emissions related to Novo Nordisk's energy production at our production sites were 171,531 tons CO₂ (2007: 189,964 tons CO₂ – 2006: 181,259 tons CO₂).

During the preparation of Novo Nordisk's response to the CDP7, we have become aware that we unfortunately have reported the scope 1 emissions as scope 2 and the scope 2 emissions as scope 1 in the CDP6. We have therefore added the 2006 and 2007 scope 1 and scope 2 emissions in the CDP7 for correct comparison. No data has been entered for the facility (production site) in Algeria for 2006 and 2007, as this was a new facility in 2008.

The scope 2 emissions in Brazil are 0, as the electricity supplied is generated by hydro power.

It will not give a better understanding of Novo Nordisk's CO₂ emissions to shown them broken down on business division, as there is no material difference between the business divisions in terms of CO₂ emissions.

Novo Nordisk defines a facility as a geographical area, where Novo Nordisk has production. At some of the production sites, other activities than production might take place. For example, the facility 'Bagsvaerd, Denmark' covers headquarter activities related to HR, R&D, finance etc.

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.

There is no discrepancy between the use of the emission factors used as describe above and the contractual arrangements with Novo Nordisk's electricity suppliers.

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

Novo Nordisk does not retire any certificates associated with zero or low carbon electricity. As from 2009, Novo Nordisk will retire certificates from an offshore wind turbine park currently under construction.

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

In December 2008, the Novo Nordisk Environment, Bioethics and Occupational Health & Safety Committee, which is an executive committee under Executive Management, approved a timeline for the inclusion of emissions from transportation in Novo Nordisk's Climate strategy.

The approved timeline for business travel is that reporting on actual emissions will be made in Novo Nordisk's Annual Report 2009 and in 2010 it will be discussed how to reduce emissions from business travel.

The main sources of emissions are:

- 1) Car fleet
- 2) Business flights
- 3) Commuting.

Re 1) Car fleet

With regards to Novo Nordisk's car fleet, the Environment, Bioethics and Occupational Health & Safety Committee approved in May 2009, that all Novo Nordisk affiliates in 2010 will have to calculate their 2009 baseline and agree on an action plan to reduce the emissions from the car fleet over a period of five years. The roll out of these global company car guidelines will be governed by Novo Nordisk Balanced Score Card process and supported by a TeamSite with information, calculation tools, knowledge sharing etc.

Re 2) Business flights

We are currently piloting a state of the art telepresence solution between the hub 'Copenhagen (Denmark) - Zürich (Switzerland) - Princeton (US)' in order to find alternative solutions to business flights.

Re 3) Commuting

Novo Nordisk is currently investigating the participation in a carpooling project with global outreach. It has been decided that reporting data on commuting is not within the current scope of Novo Nordisk review of transport emissions. Instead focus will be on changing behaviour.

Emissions in metric tonnes CO₂-e.

Re 1) Car fleet

Novo Nordisk has estimated that Novo Nordisk in 2007 emitted 53,000 tons CO₂ from the car fleet, which is the main source of emissions from business travel.

Re 2) Business flights

With regards to employee business travel it is estimated that Novo Nordisk in 2007 emitted 29,000 tons CO₂ from the purchased flights, which is the second main source of emissions from business travel.

Re 3) Commuting

No estimates have been made.

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

Re 1) Car fleet

The emissions are estimated based on reports from the leasing companies we use.

Re 2) Business flights

The emissions are estimated based on reports from the travel agents we use.

Re 3) Commuting

No estimates have been made.

13.2. External distribution/logistics

Describe the main sources of emissions

In December 2008, the Novo Nordisk Environment, Bioethics and Occupational Health & Safety Committee approved a timeline for the inclusion of emissions from transportation in Novo Nordisk's Climate strategy.

Novo Nordisk's shipping department has initiated a project 'from air to sea' that aims at decreasing the amount of finished products shipped by air. In 2008, 58% of the combined finished product production was sea-freighted to our large overseas markets, which is an increase.

Emissions in metric tonnes CO₂-e.

With regards to external distribution/logistics (product distribution) it is estimated that Novo Nordisk in 2007 emitted 34,000 tons CO₂ and in 2008 emitted 38,000 tons CO₂. The majority of the 38,000 tons CO₂ is related to air freight (91%). The remaining part is related to sea freight (5%) and freight by truck (4%). The emissions are calculated based on reports from the transporters of products whether the products are transported by ship, air or truck.

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

Data is reported to Novo Nordisk by the transportation companies.

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

The use and disposal of Novo Nordisk's products and services has the least emission of CO₂ emissions given the types of products and services, which Novo Nordisk deliver. This is based on a Life-Cycle-Analysis made on Novo Nordisk's FlexPen® by an external consultancy.

FlexPen® is a prefilled, single-use insulin injection system. It offers benefits to people with insulin-treated diabetes as it is simple to learn¹, simple to use² and discreet. Once used, however, FlexPen® has to be disposed of, and this raises questions about any additional environmental impact of using a prefilled device. The energy consumption when using one FlexPen® per week for a year corresponds to driving less than 45 km (EU)/ 80 km (Japan)/ 45 miles (US) in a family car. Another comparison is that the environmental impacts from a FlexPen® in crude terms are similar to those of a music CD – without its box.

FlexPen® is similar to other consumer products of the same weight with respect to environmental impacts. A detailed life cycle assessment of FlexPen® as used in the EU, the US and Japan has been made, and the main results are available in the form of so-called Environmental Product Declarations (EPDs), one for each market. Please see the enclosed EPDs for EU, Japan and US.

Emissions in metric tonnes CO₂-e.

See reply to "Describe the main sources of emissions".

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

See reply to "Describe the main sources of emissions".

13.4 Company supply chain

Describe the main sources of emissions

Novo Nordisk is not measuring emissions in other areas of the supply chain. Novo Nordisk has recently embarked on a global responsible sourcing project which will review the current supplier approval and audit procedures which for some years have included non-financial performance of the supplier, including resource consumption.

While this project is being implemented, Novo Nordisk is engaging with a number of Novo Nordisk's transport suppliers of Novo Nordisk's products in order to reduce the emissions by changing the mode of transportation, securing reporting of emissions and emission reducing initiatives by the transporter. In addition, Novo Nordisk has engaged with the Danish taxi company we have a company agreement with in order to encourage them to decide on an environmental policy including focus on climate. This activity will be followed up by discussions on reducing and reporting emissions at the next contract negotiations with the supplier.

Emissions in metric tonnes CO₂-e.

See reply to "Describe the main sources of emissions".

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

See reply to "Describe the main sources of 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

Novo Nordisk has no other 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.

All available information has been provided above.

Further information

http://cdp.cdproject.net/attachedfiles/Responses/53638/8289/10440NOVO_FlexpenEPD.EU.v2.pdf

http://cdp.cdproject.net/attachedfiles/Responses/53638/8290/10440NOVO_FlexpenEPD.JP.v2.pdf

http://cdp.cdproject.net/attachedfiles/Responses/53638/8291/10440NOVO_FlexpenEPD.US.v2.pdf

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.

There is no direct effect in terms of reducing emissions by third party and their use of Novo Nordisk's products and services. However, there is a potential to reduce GHG emissions through communicating the close link there is between preventing the lifestyle disease diabetes type 2 and mitigating climate change. By promoting healthy food (more vegetables, less red meat) and physical activity (less driving in cars) we can reduce emissions and improve public health.

Novo Nordisk has therefore initiated a campaign in Denmark leading to the COP15 which will promote the benefits of sustainable living. Under the title: 'Put your foot down for change' we promote sustainable living by inspiring families to take a step towards a more sustainable lifestyle. The key message being: Healthy people make a healthy planet.

Campaign materials will be available from August 2009.

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

0

Further information

At the site in Montes Claros, Brazil, Novo Nordisk is using biomass from Eucalyptus trees, certified by the Brazilian authorities. In 2008, Novo Nordisk used 4,332 tons wood for the steam production as an alternative to heavy fuel oil. The eucalyptus comes from plantations replanted with a rotation time of 8 years. Novo Nordisk considers this fuel CO₂ neutral.

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.

Novo Nordisk publishes metric tonnes of CO₂ emissions per sales indexed with 2003 = 100; see page 14 in Novo Nordisk's Annual Report 2008 for graph. The index figures are included in the non-financial highlights on page 17. In terms of performance, the index has from 2003 to 2008 dropped from 100 to 60, illustrating the very positive trend in both Novo Nordisk's emission reduction and increase in sales.

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.

Tons of CO₂ emissions per sales in DKK. All numbers used for the index calculation can be found on page 16 and 17 of Novo Nordisk's Annual Report 2008 and are covered by the financial audit statement and the non-financial assurance statement. The 2003 figures can be found in Novo Nordisk's Annual Report 2007. See all data in attached Word-document "16.1_Please supply a financial emissions intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.doc".

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

60

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.

Novo Nordisk does not use any activity related intensity measurement as part of our carbon management, as our target is an absolute reduction. The most appropriate indicator of emission intensity for Novo Nordisk is comparing to sales, if not comparing the absolute reduction which we find the most important measurement to focus on in terms of reel performance.

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.

Tons of CO₂ emissions (kg) per employee (headcount end year). The CO₂ emission and number of employees can be found on page 16 and 17 of Novo Nordisk's Annual Report 2008 and are covered by the financial audit statement and the non-financial assurance statement. The 2003 figures can be found in Novo Nordisk's Annual Report 2007. The actual activity related intensity measurement is not reported, but included here for the benefit of CDP. See all data in attached Word-document "16.2_Please supply an activity related intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.doc".

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

7.9

Further information

http://cdp.cdproject.net/attachedfiles/Responses/53638/8293/16.1_Please_supply_a_financial_emissions_intensity_measurement_for_the_reporting_year_for_your_combined_Scope_1_and_2_emissions.doc

http://cdp.cdproject.net/attachedfiles/Responses/53638/8295/16.2_Please_supply_an_activity_related_intensity_measurement_for_the_reporting_year_for_your_combined_Scope_1_and_2_emissions.doc

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

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

Yes

Novo Nordisk's total energy consumption decreased by 9% in 2008, which translates into a similar 9% decrease in the energy-related emissions of CO₂ from 236,000 tons in 2007 to 215,000 tons in 2008. The decrease in CO₂ was primarily due to decreased emissions from the production site in Kalundborg in Denmark as a result of changes in production, process optimisations as well as realisation of energy-saving projects. The annual CO₂ emission is now close to the 2004 (210,000 tons) baseline year, only 2% above, and Novo Nordisk is confident that the ambitious 10% absolute reduction target will be met in 2014. As planned, this will happen through a continued effort in the cLEAN® programme and secondly, the highly prioritised energy-saving programme. This energy-saving programme has until now resulted in an estimated 20,000 ton reduction in CO₂ emissions. Thirdly, green electricity from the offshore wind farm at Horns Rev II in Denmark will give substantial reductions, starting in the end of 2009.

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.

9 %

Have the emissions increased or decreased?

Decreased

Further information

Novo Nordisk has set an absolute reduction target of 10% with baseline year 2004. The development in the years from 2004 till 2008 is as follows.

2004: 210,000 tons
2005: 228,000 tons => +8%
2006: 229,000 tons => +0.4%
2007: 236,000 tons => +3%
2008: 215,000 tons => -9%

We work continuously to reduce the emissions and therefore expect further decreases in the total scope 1 and scope 2 emissions in the years to come.

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.

The total scope 1 and scope 2 emissions reported are covered by both the assurance statement by PricewaterhouseCoopers in Novo Nordisk's Annual Report 2008 (page 115) and the methodology is confirmed by Ecofys in the Climate Saver Report.

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

PricewaterhouseCooper's work is undertaken to perform an evaluation of the non-financial reporting against the principles of materiality, completeness and responsiveness of the AA1000AS (2003). Moreover, they plan and perform their work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 'Assurance Engagements other than Audits or Review of Historical Financial Information' to obtain limited assurance that the non-financial reporting is free of material misstatements and that the information has been presented in accordance with the non-financial accounting policies. This information is included in the Independent Assurance Report on Non-financial Reporting 2008, which can be found on page 115 in Novo Nordisk's Annual Report 2008. The work performed by PricewaterhouseCoopers secures a limited assurance that the Nonfinancial Reporting is free of material misstatements and that the information has been presented in accordance with the non-financial accounting policies.

In 2008, Novo Nordisk embarked on a 'Sarbox-light' process, where the non-financial reporting will be aligned with the Sarbox-control environment for Novo Nordisk's financial reporting. Novo Nordisk is listed on the NYSE and is therefore required to follow Sarboannes-Oxley. Our aspiration is that the assurance statement given on the non-financial reporting in Novo Nordisk's Annual Report 2010 will be with a reasonable level of assurance.

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

Please attach a copy/copies.

http://cdp.cdproject.net/attachedfiles/Responses/53638/8298/Independent Assurance Report on the Non-financial Reporting 2008_NNAR08_115.pdf

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

PricewaterhouseCoopers work is undertaken to perform an evaluation of the Non-financial Reporting against the principles of materiality, completeness and responsiveness of the AA1000AS (2003). Moreover, they planned and performed their work in accordance with the International Standard on Assurance Engagements (ISAE) 3000, 'Assurance Engagements other than Audits or Review of Historical Financial Information', to obtain limited assurance that the Nonfinancial Reporting is free of material misstatements and that the information has been presented in accordance with the non-financial accounting policies ie for CO2 emissions that the reporting is made according to the GHG Protocol.

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.

Scope 1 and scope 2 emissions have been verified.

Further information

Novo Nordisk has used external third-parties to verify our non-financial reporting since the first environmental report was published in 1994. Novo Nordisk strongly believes in the value of external verification to increase the credibility of our reporting. In Novo Nordisk's Annual Report 2008, page 115 you will find the 'Independent Assurance Report on the Non-financial Reporting 2008' issued by PricewaterhouseCoopers. Their statement is based on the Accounting policies for non-financial data defined on the pages 91 to 92. The accounting policy for emissions of CO2 can be found on page 91. The definition reads "Emissions of CO2 from energy (total) are based on standard factors for fuel and for energy on a three-year average of available emission factors from the external suppliers of energy. Hence, emission factors for 2008 are the three-year average of 2005 to 2007. The emissions are calculated according to the GHG protocol". In addition, the basis for the Climate Saver agreement between WWF and Novo Nordisk on our absolute reduction target of 10% is that the data is calculated according to the GHG Protocol. As part of Novo Nordisk's annual Climate Saver Report to WWF, the methodology is confirmed by Ecofys. This report is made annually as an internal report to WWF from Novo Nordisk and can therefore not be made public available.

On the basis of a careful analysis of the GRI guidance and requirements, Novo Nordisk declares an Application Level of A+ for the Novo Nordisk Annual Report 2008 (print and online). Please see full GRI reporting on <http://annualreport2008.novonordisk.com/how-we-perform/gri/default.asp>.

In addition 100% of Novo Nordisk's production sites are certified against ISO14001.

In general one could ask what assures? This is a question that is not easily answered in a single sentence. Assurance can have a different meaning depending on the specific stakeholder or organisation.

Some types of assurance mechanism are inherent in the activities of the company. They can be known or unknown to the stakeholders, and they can be inherent in business or voluntarily added to the activities of the company. For example, to many customers it is inherent that pharmaceutical products are under strict regulatory control, which implies that the customer can at any time rest assured that the product safety and quality are totally dependable, but not many customers think of this as assurance. There are therefore many aspects of an organisation's activities and performance that provide assurance for different stakeholders on different issues.

What is assurance? In sustainability forums, assurance is traditionally closely linked to companies' reporting of their sustainability performance. According to AccountAbility's AA1000 Assurance Standard (2003): 'Assurance is an evaluation method that uses a specific set of principles and standards to assess the quality of a Reporting Organisation's subject matter, such as Reports, and the organisation's underlying systems, processes and competencies that underpin its performance. Assurance includes the communication of the results of this evaluation to give credibility to the subject matter for its users.'

To Novo Nordisk, this type of assurance is just one of many assurance methods that are applied in the company. Just as assurance is either something inherent in the activities of the company or something the company engages in to ensure a higher level of credibility for the activities in the company, there are types of assurance that are mandatory and regulated by authorities and types that are used voluntarily. For all of these types, a range of processes is in place to provide information, documentation and assurance. Some of these are explicit assurance mechanisms, while others implicitly serve as safeguards of reliability.

In Novo Nordisk, there are many types of assurance mechanism, some more evident than others. A basis for all of these is the Novo Nordisk Way of Management, which forms the foundation for 'how we do business'. It describes the corporate values and management principles, and also lists policies on all core business activities. The values on which the assurance mechanisms are built are:

- Accountable: Each of us shall be accountable - to the company, ourselves and society - for the quality of our efforts, for contributing to our goals and for developing our culture and shared values.
- Ambitious: We shall set the highest standard in everything we do and reach challenging goals.
- Responsible: We shall conduct our business in a socially and environmentally responsible way and contribute to the enrichment of the communities in which we operate.
- Engaged with stakeholders: We shall seek an active dialogue with our stakeholders to help us develop and strengthen our businesses.
- Open and honest: Our business practices shall be open and honest to protect the integrity of the Novo Group companies and of each employee.
- Ready for change: We must foresee change and use it to our advantage. Innovation is key to our business and therefore we will encourage a learning culture for the continuous development and improved employability of our people.

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.

Novo Nordisk publishes its CO2 emissions in the integrated Annual Report (annualreport2008.novonordisk.com). The accuracy of the CO2 emissions is assured by PricewaterhouseCoopers. A third party statement is included in the annual report (page 115). The data is calculated according to the GHG protocol; see accounting principles on page 91.

The emission factors for electricity and district heat in Denmark, where 85 % of the emissions take place, are published by the Danish "Energinet Denmark" as grid-factors for

East Denmark and West Denmark. The factors are published each 1 May in a big report, where the methodology as well as the development is accounted for. The emission factors are collected from our production sites outside Denmark – who get the factors from the suppliers. Where this is not possible, we use standard factors from the GHG protocol. Steam factors (steam from Powerplant in Denmark) are provided by the actual power plant, calculated by the same methodology as used for the electricity factor calculation. Steam factor for China is estimated, using the same methodology as in Denmark, but with a lower efficiency. For our activities in China and Algeria, Novo Nordisk uses the electricity factors published in the Green House Gas Protocol (China and Algeria), because supplier data are not available.

The main sources of uncertainty lies with the quality of the emission factors from some of the countries in which we operate. If the uncertainty is too material it has been agreed with WWF to use standard emission factor from the GHG Protocol.

The energy consumption (direct and indirect supply) includes both direct supply of energy (internally produced energy), for example natural gas, fuel oil and other types, and indirect supply of external energy (externally produced energy), for example electricity, steam and district heat. The consumption of fuel and externally produced energy is based on meter readings and invoices. The data is registered on a monthly basis in CATCH (SAP BW) for control and reporting according to Novo Nordisk BSC process.

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

The uncertainties in the reported data are insignificant and do not affect the accuracy of the reported data. The energy consumption is subject to a 'control of completeness', where the registered energy consumption is compared to the invoiced energy consumption.

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.

EU emissions trading scheme

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

100% of the emissions reported from our production sites (scope 1 and scope 2) is reported against the GHG Protocol. The partnership agreement with WWF is based on emission calculation against the GHG Protocol. In addition to this, Novo Nordisk has two production sites in Denmark which are covered by the European Union Emissions Trading Scheme and the reporting follows the requirements in Danish legislation on the European Union Emissions Trading Scheme and is separately audited by an external third party, as required.

PricewaterhouseCoopers is verifying Novo Nordisk's emission reports from the two sites in Denmark covered by the EU ETS Scheme in addition to the verification of the emission data included in Novo Nordisk annual reports. The emissions in 2008 were 15,000 tons CO2 in total. According to an agreement with the EU Commission, the verification of the emissions is based on amounts of purchased natural gas invoiced to the company. The EU commission has approved such an approach for small non complex emissions. In the Novo Nordisk case, the natural gas is used for producing heat and steam in a number of boilers at the two plants and as such a simple process.

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.

330000000

Select currency

Danish krone

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		
Heat		
Steam		
Cooling		

Cost of purchased fuel

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

Select currency

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
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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.

478840 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.

225280 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.

Lower 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
Biodiesel	209
Diesel oil	7
Gas oil	27
Heavy fuel oil	5647
Kerosene (other)	1971
Light fuel oil	97
Natural gas	203471
Wood (dry)	13850

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.

0 MWh

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.

100 %

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.

0 %

Further information

Novo Nordisk do not have the information regarding break down of the costs by individual energy type, total cost of fuel purchased by your company for mobile and stationary combustion and the breakdown of these costs by individual fuel type readily available in any central Novo Nordisk database, as all costs are registered as energy costs and not specified to specific fuel types.

We do not have the information on the total amount of energy generated in MWh from the fuels reported in question 20.4 readily available, since our sites do not report the produced steam to a central database. We do know that our boiler efficiency worldwide is on average 90%.

For the 0 MWh reported in question 20.6 "What is the total amount in MWh of renewable energy, excluding biomass, that is self-generated by your company?" please refer to general information on the DONG Energy partnership where Novo Nordisk has secured the production of additional renewable electricity from the windmill park Horns Rev II.

For the 100% reported in question 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?" the answer is given the fact that the due to Danish legislation 100% of the energy produced is exported to the grid.

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)?

Yes (Please answer the following questions - 21.2 to 21.4)

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	14859	16642	16642	16642	16642

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

9000

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

214727

Further information

The information given in question 21.4 is the total emission of CO2 from Novo Nordisk scope 1 and scope 2 as defined above in 2008.

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 only participate in the EU ETS. (Please go to question 22.2)

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?

In order to comply with the EU ETS, the management of the permit is managed by Novo Nordisk's Environmental Department (External Environment). External Environment is responsible for all environmental permits and ISO140001 certifications at all Novo Nordisk's production sites worldwide. In addition, they are responsible for implementing the climate strategy and the absolute reduction target.

Read more about Novo Nordisk's environmental management at <http://annualreport2008.novonordisk.com/how-we-perform/environment-health-and-safety/environmental-management.asp>.

Further information

Novo Nordisk does not participate in any other emission trading schemes other than the EU ETS. Whether Novo Nordisk will participate in other schemes within the coming two years will depend on national legislation ie whether our production in the US and Japan will be covered by any possible future emission trading schemes.

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)?

2004

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

Novo Nordisk has pledged to reduce its CO2 emissions by 10% below 2004 levels by 2014 (an absolute reduction) as a Climate Saver company (WWF).

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

Novo Nordisk has absolute reduction target applies to the scope 1 and scope 2 emissions as reported in the CDP. The 10% absolute reduction target is voluntary and bold. In light of the projected significant growth in production capacity, the absolute target represents a reduction of approximately 65%. It requires that growth in production is decoupled from growth in energy consumption and calls for both incremental advances and radically innovative solutions. The reduction is achieved through three levers; optimisation through the Novo Nordisk LEAN programme, cLEAN®, the energy efficiency programme and conversion to renewable energy. Offsets are not part of the plan.

cLEAN® Assessment is a cLEAN® Office programme established to monitor and support the progress of cLEAN® in Product Supply towards Living cLEAN®. Living cLEAN® is a state where: "The fully integrated cLEAN® improvements are sustained and continuously improved. The organisation has a cLEAN® company culture". An example of a cLEAN® project is the improvement of yield per cell explained in our answer to question 4.1.

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

Novo Nordisk has pledged to reduce its CO2 emissions by 10% below 2004 levels by 2014 (an absolute reduction) as a Climate Saver company (WWF).

Further information

Novo Nordisk emission reduction strategy is defined by our participation in the WWF Climate Savers programme. Novo Nordisk has pledged to reduce its CO2 emissions by 10% below 2004 levels by 2014 (an absolute reduction). The time frame for reaching the target is 8 years. The reductions will be achieved through a mix of energy efficiency and renewable energy projects carried out at Novo Nordisk operations globally, including green electricity from 100% new sources in Denmark. See also information in 'General 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?

The target will be reached through investment in:

- 1) time for cLEAN® activities
- 2) energy efficiency projects and
- 3) annual operating cost for green electricity.

Further investments for the new biomass boiler and not yet installed solar projects will be required

Below please find examples of how we have reduced emissions from Novo Nordisk's US activities through:

- 1) Increased energy efficiency in Clayton

The Novo Nordisk production facility in Clayton, North Carolina, produces, formulates and packages insulin in addition to manufacturing the insulin delivery system FlexPen®. The facility has doubled in size since 2005. However, the CO2 emissions have only increased by 61% from 11,453 tons in 2005 to 18,449 in 2008. With recent optimisation of the boiler systems, HVAC systems, and the installation of efficient lighting along with motion and photo sensors the Clayton facility has realised a 9.8% reduction in energy in the first 2 months of 2009 compared to 2008. A project is underway to optimise the cooling systems and to further optimise the HVAC systems in 2009, which are expected to save at least 400 tons of CO2 emissions.

- 2) Princeton office cuts emissions from cars

The Novo Nordisk sales affiliate in Princeton has set out to reduce emissions from the car fleet by 25% over 5 years. In fall 2008, hybrid vehicles were added to the selection

of fleet vehicles for the field force. Marketing materials are printed on recycled paper and a new Green Meetings initiative aims at decreasing the carbon footprint from Novo Nordisk events.

For employees globally, a TakeAction! programme with focus on reducing emissions outside the production, was implemented in September 2008. The focus of the programme is that "It takes people to fight climate change" and TakeAction! therefore invites employees to take climate action. Whether it will be reducing business travel by 30%, arrange for a one-off fundraising, or decide to unplug the mobile charger every Friday - every little counts.

The programme offers a number of activities:

1. Plant trees
2. Ride sharing
3. Green flea market
4. Make your team go green
5. Green exercise day
6. Take the climate challenge
7. Be a climate darling.

The TakeAction! programme encourages Novo Nordisk's employees to act on Novo Nordisk's Triple Bottom Line approach in their work life. The programme gives the employees the opportunity to engage in voluntary activities in local communities or to do voluntary work in developing countries.

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?

The key performance indicator used is the actual emission of CO2. From 2008, the local CO2 reduction targets have been on the Novo Nordisk Balanced Scorecard and are therefore now directly linked to the incentive structure. This leads to an even higher commitment from the organisation.

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.

The energy saving programme continues to be very successful and shows a very good business case. It continues to prove a huge potential for further energy savings in the businesses. Until now the programme, which was initiated in 2005, has resulted in an estimated 20,000 tons reduction in CO2 emissions and a similar reduction is expected in the coming years.

2008 highlights

- 108 energy projects implemented:
- 25% had not upfront investment
- 50% had a pay back < 1 year
- an estimated reduction of 8,400 tons CO2 was achieved.

One such business case is the increased energy efficiency in Clayton described in our reply to question 23.8.

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
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Further information

We do not have that information readily available in a central database for all Novo Nordisk's production sites for answering question 23.11 to the required detail. In general it can be said, that the energy saving projects have proven to be "good business" with low payback periods. For the first three years, 50% of the projects have had a payback time less than a year.

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
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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.

It is estimated, that Novo Nordisk's future scope 1 and scope 2 emissions in 2014 (6 years) will be 190,000 tons due to the commitment to the 10% absolute reduction target. Please see graph and table attached in the Word-document "23.12_Please estimate your company's future Scope 1 and Scope 2 emissions.doc".

As the energy savings which will lead to the estimated reductions are decided upon year by year, we do not know where the reductions will be each year or in which regions.

We are updating our forecast each year. We have forecast for each business area and country, please see overview in the attached Word-document "23.12_Please estimate your company's future Scope 1 and Scope 2 emissions.doc".

Total CO2 emission forecast is:

- 2009: 212,000 tons
- 2010: 212,000 tons
- 2011: 220,000 tons
- 2012-2014: 225,000 tons.

The forecast does not take into account the fact, that Novo Nordisk in Denmark will start purchasing green electricity in 2009. The forecast for 2010 and thereafter will be approx 100,000 tons less than the figures given above, when including the green electricity. Novo Nordisk will start operating a new facility in China in 2011. It will be fully ramped up in 2013-2014.

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										
Emission forecasts										
	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2

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.

[See answer to question 23.13.](#)

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										
Energy use estimates for territory/region										
	Number	Units	Number	Units	Number	Units	Number	Units	Number	Units

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

As part of the normal business planning, all production sites are making estimates of the future energy consumption and the related CO2 emissions. This process is governed by Novo Nordisk's Balanced Scorecard process. The appointed energy stewards for each site are responsible for these estimates.

Further information

We do not have that information readily available in a central database for all Novo Nordisk's production sites for answering question 23.12 to the required detail. The energy saving projects have proven to be "good business" with low payback periods. For the first three years, 50% of the projects have had a payback time less than a year.

http://cdp.cdproject.net/attachedfiles/Responses/53638/8316/23.12_Please estimate your company's future Scope 1 and Scope 2 emissions.doc

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?

Novo Nordisk does not factor the cost of future emissions into capital expenditure expect for the normal energy budget. We are only to a very limited extent covered by the EU ETS. The cost for purchase of quotas is included in the normal energy cost budget procedure.

Novo Nordisk has an extensive energy saving programme in which the sites plan the projects each year and seek the corresponding budget for this as part of the normal budget procedure. We "allow" energy saving projects with a pay-back period of less than 5 years. The energy savings are included in the Novo Nordisk Balanced Scorecard process and as such have very high priority.

Novo Nordisk is implementing energy saving projects with a pay back period less than 5 years which is a longer ROI than other projects to stimulate the implementation. Most of the projects implemented since 2005 have pay back period with short pay back periods. In 2008, Novo Nordisk implemented 108 projects, out of which 50% had a pay back period less than 1 year. Most investment decisions are based also on the expected CO2 emissions/energy consumption.

As an example, the solar heat project in China (2007) had a pay back period of approx 2.5 years. At Novo Nordisk's new filling plant in China, currently under construction, investments are made to make a highly energy efficient plant – but lower operating costs makes the investment good business. As a result of energy efficient project design this new plant will be highly efficient. We expect a 30% improvement in the energy efficiency in the HVAC system compared to the original "business as usual" design – all good for business.

In conclusion, it has not been necessary to adjust the capital programme as a result of the Climate Strategy.

Further information

Governance

25. Responsibility: (CDP6 Q4(a))

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

Yes. (Please answer question 25.3 and 25.4)

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.

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

An executive committee on Environment, Bioethics and Occupational health has overall responsibility for climate action. Two out of the five Executive Vice Presidents in Novo Nordisk's executive management team are represented in the committee. The committee meets on a quarterly basis. The committee is headed by Executive Vice President and Chief of Staffs Lise Kingo.

The mandate of the Committee is:

- Maintain the Environmental policy, Bioethics policy and the Occupational Health & Safety policy
- Maintain the EBO strategy of the company
- Identify, develop and manage EBO issues
- Identify focus areas and appoint key focus groups to address key EBO issues
- Approve strategies, targets and action plans developed by focus groups
- Deliver input to Novo Nordisk's annual report
- Monitor Novo Nordisk's EBO performance
- Conduct yearly review of focus areas and carry out relevant benchmarks.

The Environment, Bioethics & OH&S Committee gives an annual update to Execman (including last year's performance and targets for the year).

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

Climate change targets are included in the corporate Balanced Score Card (BSC) and remuneration of executive management and relevant senior management in Novo Nordisk. The Environment, Bioethics and Occupational Health & Safety Committee, which includes representative from Executive Management, monitors and follows progress on strategy and BSC targets on a quarterly basis. Responsibility for implementation of the climate change strategy is shared between two full time personnel in production.

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?

Yes. (Please go to question 26.2)

26.2. Are those incentives linked to monetary rewards?

Climate change targets are included in the corporate Balanced Score Card (BSC) and remuneration of executive management and relevant senior management in Novo Nordisk. The Environment, Bioethics and Occupational Health & Safety Committee, which includes representative from Executive Management, monitors and follows progress on strategy and BSC targets on a quarterly basis. Responsibility for implementation of the climate change strategy is shared between two full time personnel in production. The individual incentives are recorded and follow-up through the employee 3P performance system.

Performance management in Novo Nordisk – Focus on both results and people (3P)

Novo Nordisk is facing an exciting yet at the same time challenging time of continued growth in a competitive global industry. Critical for the success of Novo Nordisk is consistent, excellent performance of our people based on aligned goals and an engaging culture. We must ensure that our efforts are in line with the business priorities and we must ensure to deliver results and value to our customers. This means for Novo Nordisk to

- Focus on our most important asset – the talents and strengths of our people.
- Continuously support and improve performance to develop our company.
- Stay focused and execute on our key priorities.

3P stands for "People Performance Process" and is an integrated part of Novo Nordisk Way of Management. Performance management in Novo Nordisk sets focus both on people and results, this means driving business results and engaging and exciting people to exceptional performance. It is to deliver results through engaged people. What are the benefits?

3P facilitates alignment of individual goals with Novo Nordisk Business Goals. It also drives clarity so that people understand what needs to be done to be successful within Novo Nordisk.

- 3P aligns our work with our goals - Everyone will know how they contribute to the overall goals of the organisation.
- 3P helps us focus on things that matter - Clear and measurable goals means that everyone knows what is expected of them.
- 3P enables better feedback - Everyone is sure of receiving documented feedback.
- 3P makes it easier to stay on track - It will be easier to react before issues become performance problems.
- 3P sharpens our eye for talent - It will be much easier to spot and develop talent.
- 3P links performance and reward – It is easier to assess and reward performance.

The process

Novo Nordisk launched the People Performance Process (3P) to set a global standard for performance management in Novo Nordisk and replace a broad variety of performance management systems globally. 3P is a management process designed to contribute to our ability to consistently deliver results and to direct focus on people development and engagement. 3P is intended to ensure alignment of individual goals with the organisation's goals and priorities to drive results and meet customer needs. Going forward focus will be on building a performance leadership culture across the organisation where the focus is on bringing out the best of all our people through securing clarity of direction and expectations, building on strengths and providing on-going constructive feedback and support.

Performance leadership must be exercised daily. The 3P system is a support tool to the effective management of performance and consists of three main phases:

- Goal setting: Setting individual business goals in alignment with our corporate goals, the BSC and business area priorities. Setting aligned development targets to ensure execution of these business goals.
- Mid-year review: Review of progress, align and reassess expectations to ensure achievement of targets.
- Year-end appraisal: Feedback and assessment of individual performance, goal achievement and development, this means how well one contributed to Novo Nordisk's success.

In 2009, the KPI is:

The KPI measures tons of CO2 saved from energy saving projects and the number of energy saving projects implemented:

- x tons CO2 saved
- y implemented projects.

Tons of CO2 is based on the business cases for the projects and reported in the 'energy priority.

26.3. Who is entitled to benefit from those incentives?

The following levels of the organisation are remuneration on this KPI:

- Executive Vice Presidents
- Senior Vice Presidents
- Corporate Vice Presidents
- Vice Presidents
- Managers
- Team leaders.

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?

In August 2006, Novo Nordisk framed a climate communications strategy aimed at proactively communicating our strategy and performance to key internal and external audiences. One full-time employee is dedicated to driving climate communication.

In September 2008, we launched an internal climate action campaign under Novo Nordisk's global volunteering program TakeAction!. The purpose is to engage all Novo Nordisk employees in climate action. The campaign toolkit includes energy saving tips at work and on the road (eco-driving), an online climate challenge (test whether you're a climate darling or a climate drop-out) and 5 ideas for climate action in departments and business areas (ride-sharing – car-pooling and bike clubs, 'make your team go green' (energy saving campaign in offices), tree planting and fundraising for local or global climate projects.)

In March 2009, Novo Nordisk supported WWF's Earth Hour campaign by developing a special Earth Hour kit with ideas for employees on how to mark this event. Employees globally took part in the event as in Finland, the Middle-East, Japan, Denmark and China.

Novo Nordisk has won a number of external recognitions for our reporting. The latest award was an award for Integrated Reporting, which Novo Nordisk was awarded for the second year in a row. Novo Nordisk's annual report has been named the best integrated performance report in the only annual, global corporate responsibility reporting awards. At its annual CR Reporting Award's gala, CorporateRegister.com awarded its 'Best Integrated Report Award' to Novo Nordisk. Vice President of Global Triple Bottom Line Management, Susanne Stormer accepted it on behalf of the company. BASF and AXA were, respectively, the first and second runners up for the award, which is given to the company perceived to have the best combined reporting for financial and non-financial performance. "The award recognises not just Novo Nordisk's reporting but the company's reputation as a leader in triple bottom line management," Stormer said.

The CR Reporting Awards programme identifies and acknowledges the best in corporate non-financial reporting. Over 2,000 companies with reports published between September 2007 and October 2008 were invited to enter and the voting jury consists of the online reporting community – people who read and use environmental, sustainability and corporate responsibility reporting.

Also, Novo Nordisk has been rated by SAM Research and included in the DJSI since the first rating was made. Novo Nordisk has been sector leader twice. We currently hold a

gold rating.

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.

Yes

Novo Nordisk discloses total CO2 emissions and an index graph on CO2 emissions per sales in the Annual Report – both print and online.

The Novo Nordisk climate strategy has been covered in both the management section and feature articles in all Annual Reports since 2005. The articles have described Novo Nordisk's climate activities from various angles and included communication of progress in achieving CO2 reductions through energy savings.

The full Novo Nordisk's Annual Report 2008 (climate performance reported on pp. inside flap, 14, 17, 28-29, 90 and 93) and supporting information in the online universe can be accessed through annualreport2008.novonordisk.com.

In May, 2009, Novo Nordisk added a special section on climate action to our global website communicating our position, targets and performance. See: <http://www.novonordisk.com/sustainability/default.asp>.

http://cdp.cdproject.net/attachedfiles/Responses/53638/8318/Novo_Nordisk_UK_2008.pdf

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

Yes

- An annual Climate Saver report to WWF on which a factsheet is made
- WWF's websites (<http://www.worldwildlife.org/climate/climatesavers2.html> and http://www.panda.org/what_we_do/how_we_work/businesses/business_industry/climate_savers/)
- Additional online reporting at <http://annualreport2008.novonordisk.com>.
- Climate section on [novonordisk.com](http://www.novonordisk.com) (<http://www.novonordisk.com/sustainability/default.asp>).

http://cdp.cdproject.net/attachedfiles/Responses/53638/8319/10.NovoNordisk_FactSheet_160309.pdf

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

Recognising the responsibility of business in tackling climate change, Novo Nordisk is engaged in a range of climate advocacy activities. In a global context, Novo Nordisk is an active and sponsoring partner in the Copenhagen Climate Council www.copenhagenclimatecouncil.com and the World Business Summit on Climate Change which took place in Copenhagen from 24 to 26 May, 2009.

On the event of the G20 meeting in London, the Copenhagen Climate Council sent an open letter calling for world leaders to include a new global climate deal in global economic recovery plans. The letter was signed by Novo Nordisk EVP Lise Kingo and printed in the International Herald Tribune: <http://www.copenhagenclimatecouncil.com/get-informed/news/g20-leaders-must-lock-on-to-a-sustainable-course.html>

The Copenhagen Climate Council is an independent global initiative gathering business leaders from Europe, the Americas, Asia and Oceania and leading politicians, authorities and scientists. The Copenhagen Climate Council seeks to promote a broad global dialogue and build momentum for reaching an ambitious, global and binding treaty at the UN Climate Summit in Copenhagen in December, 2009. The World Business Summit on Climate Change will be a key business event resulting in a 'Copenhagen Call' which will be handed over to the Danish Prime Minister hosting the COP-15. Ban Ki-moon, Yvo de Boer, Al Gore and Tony Blair are among the key note speakers of the summit.

On a national level, Novo Nordisk has been invited to sit on the Danish 'Erhvervs Klimapanelet' (Business Climate Council), where the Danish initiative towards COP15 are discussed and coordinated between the Danish Government and Danish industry. End May 2008, Novo Nordisk signed a WWF letter to the US Senate in support of the S.3036.

The latest public affair activity Novo Nordisk engaged in was the a Capitol Hill briefing hosted by the U.S. Senate Environment and Public Works Committee that climate protection organised where senior executives from a dozen of the companies told attendees that profitability can go hand-in-hand with climate strategy with the key message that while the businesses' reductions are significant, the current climate emergency also demands the implementation of comprehensive climate policies at both national and international levels. See more at http://www.panda.org/wwf_news/news/?uNewsID=160503.

Novo Nordisk is also a signatory to the UN Global Compact – Caring for Climate and the Bali and Poznan Communiqués of the UK Corporate Leaders Group.

Further information