

CDP Response Climate Change 2015 of ThyssenKrupp AG



CDP holds the world's biggest collection of corporate climate data. The organization publishes its annual climate change report on behalf of 822 investors representing assets of 86 trillion euros. Almost 2,000 listed companies disclosed data to be independently assessed against CDP's scoring methodology.

Thanks to its climate protection activities ThyssenKrupp, with a score of 99 A-, scored not only as one of the DAX leaders, but also as one of the five best companies in the energy and materials sector in the German-speaking DACH region (Germany, Austria, Switzerland).

The CDP score is based on disclosure of CO2 emissions, rated on a scale of 0 to 100, and performance in avoiding CO2 emissions (scale from D to A). Years of transparent reporting on CO2 emissions and actual climate protection activities formed the concrete basis for ThyssenKrupp's score.

Please keep in mind that the following answer was submitted in June 2015.
Any formatting as well as options on how to answer are predefined by the CDP

Module: Introduction**Page: Introduction****CC0.1 Introduction**

Please give a general description and introduction to your organization.

ThyssenKrupp is a diversified industrial group with traditional strengths in materials and a growing share of capital goods and services businesses.

Around 161,000 employees in nearly 80 countries work to develop high-quality products and intelligent industrial processes and services for sustainable progress. Their skills and commitment are the basis of our success. In fiscal year 2013/2014 ThyssenKrupp generated sales of around €41 billion.

Innovations and technical progress are key factors in managing global growth and using finite resources in a sustainable way. With our engineering expertise in the areas of "Mechanical", "Plant" and "Material", we enable our customers to gain an edge in the global market and manufacture innovative products in a cost and resource efficient way.

ThyssenKrupp has six Business Areas:

- Components Technology supplies a range of high-tech components for general engineering, construction equipment and wind turbines. In the auto sector our activities are focused on crankshafts, camshafts, steering systems, dampers, springs, stabilizers and the assembly of axle modules.
- Elevator Technology supplies passenger and freight elevators, escalators and moving walks, passenger boarding bridges, stair and platform lifts as well as service for the entire product range. Over 900 locations worldwide form a tight-knit sales and service network that keeps us close to customers.
- The product portfolio of Industrial Solutions encompasses chemical plants and refineries, equipment for the cement industry and innovative solutions for the mining and processing of raw materials, naval shipbuilding, and production systems for the auto industry.
- With 500 locations in 45 countries, Materials Services specializes in materials distribution including technical services.
- Steel Europe, with a steel mill in Germany, produces and supplies premium flat products to customers in the auto industry and other steel-using sectors. The range also includes products for attractive specialist markets such as the packaging industry.
- Steel Americas with a steel mill in Brazil supplies in particular the American market with high-quality slabs.

CC0.2 Reporting Year

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Tue 01 Oct 2013 - Tue 30 Sep 2014

CC0.3 Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country
Germany
Rest of world

CC0.4 Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

EUR(€)

CC0.6 Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.

If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see <https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

Further Information

Please keep in mind that whenever CO2 or CO2 efficiency is mentioned within our answers, always reference is made to all greenhouse gases (GHGs).

Module: Management

Page: CC1. Governance

CC1.1 Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a Please identify the position of the individual or name of the committee with this responsibility

The highest level of responsibility for climate change strategy and management within ThyssenKrupp is our CEO Dr. Heinrich Hiesinger (Chief Executive Officer / chairman of the executive board). Amongst other issues he is responsible for the corporate strategy which includes climate change.

The climate change management within the Corporate Function Technology, Innovation & Sustainability (TIS) is located in his executive portfolio.

Furthermore, ThyssenKrupp's Sustainability Committee, which meets one time during the fiscal year, decides about indirect financial targets including climate change issues. The Sustainability Committee is composed of the Executive Board, the CEOs of the Business Areas and Heads of Corporate Functions.

CC1.2 Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Board/Executive board	Monetary reward	Efficiency target	The performance bonus is the only one-year variable element of compensation. In addition to the three core weighted financial performance indicators (EBIT, FCF, TKVA), there is also a multiplicative correction factor. This allows the Supervisory Board to adapt and individually differentiate the overall target achievement calculated from the aforementioned performance indicators in a range of +/-20%. The correction factor is based equally on a sustainability multiplier and a discretionary factor. The sustainability multiplier is based on criteria and targets from indirect financial areas, such as employees, innovations, customers, environment (incl. climate) and corporate social responsibility. The discretionary factor is set by the Supervisory Board to evaluate overall performance.
Environment/Sustainability managers	Monetary reward	Efficiency project Efficiency target Other: Various other related projects/programs	Part of the annual bonus is related to the achievement of sustainability projects (including climate change).

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Process operation managers	Monetary reward	Efficiency project	Energy Efficiency projects reported within CDP are subject to the compensation of responsible managers for these projects. (in most cases to the annual bonus)
Business unit managers	Monetary reward	Efficiency project	Part of the annual bonus is related to the achievement of sustainability projects (including climate change).
Energy managers	Monetary reward	Efficiency project	Energy Efficiency projects reported within CDP are subject to the compensation of responsible managers for these projects (in most cases to the annual bonus).
Facility managers	Monetary reward	Efficiency project	Energy Efficiency projects reported within CDP are subject to the compensation of responsible managers for these projects (in most cases to the annual bonus).
Other: Innovation managers	Monetary reward	Other: R&D projects	One of the incentivized performance indicators is the implementation of major innovation projects (e.g. technologies reducing CO2). Also the development of new products with a lower CO2 footprint is incentivized via the completion of innovation projects and an innovation contest.
All employees	Monetary reward	Efficiency project Efficiency target	Wherever emission reduction targets or efficiency projects are in place on company level (like the exemplary reported target) these initiatives are subject to the compensation of responsible managers for these projects (in most cases to the annual bonus). Furthermore, a monetary penalty system is in place regarding company cars with emissions above the guideline level.

Further Information

Page: CC2. Strategy

CC2.1 Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	worldwide, all assets	> 6 years	In principle, our risk management does not limit the considered time frame. Usually risks are considered from 1 to 3 years but depending on the nature of risks the timeframe is extended. Especially climate change risks have longer perspectives and are therefore assessed accordingly.

CC2.1b Please describe how your risk and opportunity identification processes are applied at both company and asset level

The Group Risk management covers all operations worldwide with a focus on companies where ThyssenKrupp holds the financial control. Here, the risk management related to climate change is fully integrated. The risk management is a combined top-down/bottom-up process: Binding system standards are formulated by the Group, responsibility for measuring and controlling risks lies with the operating entities.

i) Risk assessment process on Group level ("company"): Risks are analyzed on the basis of Groupwide risk scenarios. The BAs carry out SWOT analyses to identify the relevant strengths, weaknesses, opportunities and threats for their operating units. Risk maps are documented in a web-based reporting tool covering the status of risks, threshold s, mitigation measures and early warning indicators. Financial threshold s are defined on different levels. Risks reported to the CDP as material always refer to the threshold values of the Group level. They are subject to the Risk Committee, the Executive Board and the Supervisory Board Audit Committee. There are two reporting cycles - a quarterly one and an annual one.

ii) Risk assessment process on Group company level ("assets"): All GCs have dedicated risk officers who are responsible for assessing and reporting risks. A risk catalogue defines the scope of the risk process including environmental and climate risks e.g. related to licenses, regulations or natural disasters. Risk managers/officers must be nominated for all operating entities. The documented risks of all Group Companies are fed into the risk map on Group level.

The management of our opportunities (both company and asset level) is a task shared by all decision makers. Aspects which present risks and opportunities at the same time are documented in the risk management tool. Opportunities are assessed on the basis of the existing portfolio and the strategic framework, which explicitly names climate change as a business driver.

CC2.1c How do you prioritize the risks and opportunities identified?

In a first step, the prioritization of risk and opportunities management depends on the magnitude of risks. Risks are classified according to their impact (Very slight to High) and their probability (Very slight to High). Impacts are quantified between a given range of < €50 million and >/= €500 million. The probability is set in a given range of < 10% and >/= 50% probability of occurrence.

The material Group risks identified in the risk maps as well as the results of the analyses of risk scenarios and risk provisions are discussed, validated and prioritized in meetings of the interdisciplinary Risk and Internal Control Committee (RICC) held once every quarter and chaired by the CFO.

CC2.2 Is climate change integrated into your business strategy?

Yes

CC2.2a Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

Climate Change is fully integrated into ThyssenKrupp's business strategy. It is defined as one of the main drivers within our Groupwide "More&Better" strategy. The world will need "more" consumer and capital goods, infrastructure, energy and raw materials. However, this growing demand is set against the finite nature of natural resources. Concerns over climate change and the environment together with stricter regulations call for "better" solutions. Therefore, resources need to be used more efficiently; environmental impacts of producing consumer and capital goods have to be reduced and sustainable infrastructure need to be built up.

(1) ThyssenKrupp has set up different processes to systematically integrate climate change considerations into the business strategy. The Sustainability Committee on Board level directly integrates findings from the climate change management into the overall business strategy, e.g. via defining indirect financial target like the Energy Efficiency target. Furthermore the innovation dialogue integrates CO2 considerations into the innovation processes and the innovation portfolio. All of these processes are based on internal data bases on CO2 figures (e.g. carbon footprint, groupwide environmental data collection) with verified data (partially) and market data.

(2) The following aspects are considered most relevant to concrete business decisions:

- Opportunities from CO2 efficiency: ThyssenKrupp has defined the target to increase energy efficiency by 3.5 TWh until 2020. In terms of the CO2 the means increasing efficiency by about 1.3 Mio. t of CO2. Furthermore our innovation portfolio is explicitly focused on CO2 efficient solutions. In all our Business Areas we provide a wide range of highly-efficient solutions that enable our customers to improve their energy and resource efficiency and therefore to reduce carbon emissions. For example, ThyssenKrupp has set up the InCar@plus project. In over 30 subprojects with more than 40 individual solutions, our engineers have developed new products in the areas of powertrain, chassis and steering, as well as body. These are focused on environmentally compatible solutions concerning energy efficiency, electric mobility and lightweight design. (both short-term and long-term strategy)

- Risks from climate change regulation: Risks & costs from regulation are a significant driver influencing the short-term as well as long-term strategy (as described in the risks section). Especially our steel activities and other energy-intensive activities are characterized by industry-specific high CO2 emissions with the associated costs/risks from regulations.

(3) the most important components of the short term strategy

The strategic response in the short-term is mostly related to political dialogue, risk & cost management, energy management and efficiency projects.

(4) the most important components of the long term strategy

The focus of the long term strategy is on further increasing the efficiency of our products and thus gaining from the associated market potentials. Therefore R&D plays a crucial role in this strategy. Furthermore the long-term aim is turning CO2 from production into an opportunity. A breakthrough innovation project strives to develop innovational processes for the chemical utilization of the CO2 from steel production in a cross-industry network (Carbon2Chem).

(5) Strategic advantage over competitors is our engineering competence which helps to support our customers increasing their CO2 efficiency as well as finding innovational solutions for own challenges. This includes a wide range of issues from process design for the cement industry to material expertise on light weight for the aerospace industry. The chosen strategy is focused to further strengthen this strategic unique advantage of bringing together the expertise of our diversified portfolio ("Verbundkraft"), e.g. our expertise in engineering of products with our expertise in production efficiency.

(6) Most substantial business decision with regard to climate change was to put the opportunities from CO2 efficiency in the core of our business strategy when introducing the More & Better strategy since 2011. As just stated the strategy comprises increasing our own efficiency based on a concrete target as well as advancing our customers with our outstanding engineering competence.

CC2.2c Does your company use an internal price of carbon?

Yes

CC2.2d Please provide details and examples of how your company uses an internal price of carbon

ThyssenKrupp considers all relevant influences when making managerial decisions on all levels – tactical or strategic. Potential costs or revenues are hence adequately pictured in our decision processes, controlling processes and other. In some relevant cases this requires the consideration of a price of carbon internally set and included into the considerations. It should be clarified that there is not one universal internal price of carbon. Given that ThyssenKrupp operates globally and in many different industries, it is essential to readjust any internal price of carbon to the relevant circumstances like external carbon prices.

CC2.3 Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Trade associations

CC2.3a On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Cap and trade	Support with major exceptions	Position papers, consultations in associations, participation in conferences, direct engagement with policy makers: Position refers in particular to consultation on the development of the EU ETS. post 2020 and introduction of the market stability reserve (MSR).	Emission trading is a market-based instrument of the European climate change policy. Its aim is to reduce GHG emission with a minimum of macro-economic costs. The total emissions within the EU are predefined by a cap. Thus low prices do not imply that reduction goals will not be achieved. ThyssenKrupp is not in favour of politically motivated interventions in a functioning market. Emission goals will be achieved even without these measures. The trading system is not a price-based system but explicitly volume-based controlled by a cap. This system works as planned. Interventions into this market reduce the trust into the system and destroy any basis for economic planning regarding long-term investment. The assumed necessity of the minimum carbon price is not shared by us at all. Innovation and investment is not determined by the carbon price today, but by a credible threat of a high carbon price tomorrow which however can be avoided by such innovational investment in time. For an investment protection and a sustainable perspective for German and European production locations the goals which support competitive framework conditions for the fourth period of the emission trading scheme must be set now. It is very clear that a continuation of the carbon leakage rules will be essential because in spite of all our best efforts we do not expect a sufficient outcome of the climate negotiations in Paris in order to assume a global level playing fields any time soon. Political decision making must take into account that industry is the provider of efficient solutions and services. Focus should not be the singular emissions at the production site. (Position as of June 2015)

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Energy efficiency	Support with major exceptions	Intense discussions regarding the implementation of article 8 international law, especially in Germany (EDL-G), position papers, direct engagement with policy makers.	EU energy efficiency directive requires companies in article 8 to perform energy audits unless they are SMEs. Owing to the definition of the commission subsidiary company of the group is not accepted as an SME. This results in an unpredicted amount of audits to be performed across Europe for companies such as ThyssenKrupp and hence defies intention of the commission to generate an instrument that benefits industry without burdening it unnecessarily with administration. With respect to the upcoming revision of the directive in 2016 these shortcomings should be addressed. (Position as of June 2015)
Other: Climate action plan North Rhine Westphalia	Support with minor exceptions	Intense contributions to the proposed draft; active participation from group level at the coordination committee of the state government, direct engagement with policy makers.	North Rhine Westphalia has passed a climate change law which mandates climate action plan addressing both mitigation and adaptation engagements. Predominantly, this only has a binding effect for the state government, but through implementation of laws and regulations this can also affect industrial locations in the state. The alignment of climate change and sustainable industrial locations is a key aspect of the plan. North Rhine Westphalia appears to be well on track to reach its goals for 2020. Particular emphasis must be put on the fact that North Rhine Westphalia has sizeable GHG emissions which relate to the production of goods and services that are consumed outside the state. (Position as of June 2015)

CC2.3b Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
BDI (Federation of German Industries) and sub-associations	Consistent	A successful implementation of the ambitious German and European energy goals requires a consistent and aligned approach of the different governmental levels. The various energy and climate policies need to be interlinked and harmonized. Contradictory regulations need to be prevented.	ThyssenKrupp is part of the relevant working groups, expert panels, policy dialogues and partially provided funding for the campaigning. Our CEO is on the board of the association. (Position as of June 2015)

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Several	Consistent	German and European climate and energy regulation effect many industries in Germany directly or indirectly in a substantial manner. Sometimes this results in very detailed issues which need to be addressed in an industry specific context. Overall cesspool versions are expected to be in line with the position of the BDI.	ThyssenKrupp and its subsidiaries are a member of several other national trade federations which come together in the BDI. Our engagements is of varying nature. (Position as of June 2015)
ICC	Consistent	Particular emphasis should be given to the use of carbon for other primary purposes and energy generation (e.g. cement production). Decarbonization is somewhat misleading because not to use of carbon is harmful for the environment but the emission of greenhouse gases; hence closing the carbon cycle can be a valid alternative to avoiding carbon in some specific applications.	ThyssenKrupp is represented in the relevant commission and contributes to position papers. (Position as of June 2015)
Eurofer and world steel	Mixed	Particularly the steel industry is strongly affected by issues of energy and climate policies. Given the atherogenic nature of the European and especially global steel industry positions sometimes deviate quite substantially from our own. Energy and climate policies should not be misused as international trade barriers and that the danger of carbon leakage following unilateral regulations with out protective rules is a major concern.	ThyssenKrupp and its subsidiaries are a member of the relevant working groups, expert panels and policy dialogues. We are represented in the governing bodies of these associations. (Position as of June 2015)

CC2.3h What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

The coordination of the climate change strategy and climate policies lies within the same department. Our Group Coordinator Energy, Environment and Climate Policies (within this department) coordinates a consistent group positioning based on the positions of our companies (assets) and ensures alignment with our climate strategy and related energy policy issues. Furthermore strategy and policy approach are aligned with the board.

CC2.4 Would your organization's board of directors support an international agreement between governments on climate change, which seeks to limit global temperature rise to under two degree Celsius from pre-industrial levels in line with IPCC scenarios such as RCP2.6?

Yes

CC2.4a Please describe your board's position on what an effective agreement would mean for your organization and activities that you are undertaking to help deliver this agreement at the 2015 United Nations Climate Change Conference in Paris (COP 21)

Climate change is a global issue – hence it requires global solutions. Any piecemeal approach is likely to deliver suboptimal solutions and might be heavily distorting important issues such as international trade or global competitiveness. The agreement under the UNFCCC is the responsibility of governments, not companies or private organisations. ThyssenKrupp does not seek an active role in Paris. Having provided all interested parties with adequate information and positions it should be left to the decision-makers to come up with an adequate solution of this global issue.

The ideal solution would be a robust enforceable global agreement which treats all companies and corporations equally irrespective of their location. If everyone were burdened with comparable costs and were given indiscriminatory access to markets, currently raised concerns regarding carbon leakage and losing global competitiveness should disappear.

Looking at solution strategies and adequate political support it should be realised, that avoiding carbon as such is not always a path to success as such. Climate change is not caused by using carbon, but by emitting greenhouse gases. In specific cases the continued use of carbon coupled with closing the carbon cycle is a promising option and must be adequately supported. This specially concerns R&D and deployment as well as providing adequate infrastructures.

COP 21 is not expected to deliver a robust global agreement. Rather it will provide a framework for regional and national activities starting afterwards. A key challenge will be to ensure that such individual systems will not be detrimental by impacting negatively on global competitiveness particularly also technologically advanced production sites and solution providers.

It will be essential to carefully assess the outcome of COP 21 before making any further recommendations for policy adjustments or new policies, certainly ThyssenKrupp will contribute with its expertise where asked.

Further Information

Page: CC3. Targets and Initiatives

CC3.1 Did you have an emissions reduction target that was active (ongoing or reached completion) in the reporting year?

Absolute target

CC3.1a Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions (metric tonnes CO2e)	Target year	Comment
Abs1	Scope 1+2	100%	4.4%	2013	28500000	2020	The absolute reduction target is primarily an energy efficiency target which has been translated into CO2. In fiscal year 2013/2014, we launched a group-wide energy efficiency program (GEEP) aimed at achieving sustainable efficiency gains of 3.5 TWh by fiscal 2019/2020. The program is being implemented through concrete projects at the individual sites, e.g. through improved utilization of waste heat, reduction of stand-by times, and replacement of plant components. In addition, efficiency and benchmark analyses and expert workshops are carried out on an ongoing basis.

CC3.1d For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions)	Comment
Abs1	14%	36%	

CC3.2 Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

Yes

CC3.2a Please provide details of how the use of your goods and/or services directly enable GHG emissions to be avoided by a third party

At ThyssenKrupp, numerous products and product lines aim to avoid emissions in the use phase at our customers.

InCar®plus

i) InCar®plus comprises 40 new components and solutions for the auto industry (powertrain, chassis & steering as well as body) that boost CO2 efficiency. For instance, the powertrain subproject is concentrating on the further development of the valve train, with the objective to increase the efficiency of the combustion engine and significantly reduce fuel consumption and therefore emissions.

ii) The innovations can sum up savings of up to 8 grams of CO2 per kilometer per vehicle. Looking at the overall life cycle of a car, including production and recycling, InCar®plus represents a saving of 1.6 tons of CO2 per vehicle. The assumed lifetime of a car has been set to a reach of 200,000km (here the distance is relevant, not timeframe). The solutions are currently in the market entry phase so that the total emissions avoided can only be analyzed in scenarios for different markets. For example, if these components were already applied in all new cars produced in Germany in 2014 as a rough scenario (~3 Mio. cars), this would have led to a total reduction of 4.8 Mio. t of CO2 over the lifetime.

iii) The lifecycle assessment for the InCar®plus project has been performed and verified according to ISO 14040/44. The methodological approach, including emissions factors, assumptions, GWPs and methods, is in line with internationally accepted impact categories developed by the European automotive industry. Concrete emissions factors and calculations cannot be disclosed for confidentiality reasons. Here, mostly CO2 is relevant, with a GWP of 1 t CO2e per t CO2.

Envinox

i) Another product among our various product lines which saves emissions for our customers from ThyssenKrupp's Business Area Industrial Solutions is EnviNOx®. It is not only the most efficient currently available de-N2O® process for nitric acid, it has also resulted in European emission limits for N2O being corrected downward. The process uses a special catalyst to convert the laughing gas (N2O) and NOx generated during the production of nitric acid into nitrogen, oxygen and water. EnviNOx® units have been installed for numerous clients around the world. An exemplary complex comprises a 1,200 t/day nitric acid plant and a UAN plant with a daily capacity of 3,395 t/day liquid urea ammonium nitrate solution with a nitrogen content of 32 percent. The EnviNOx® reactor consistently achieves very high abatement for N2O (99% and above), while NOx emissions are reduced to effectively zero (< 1ppm) making for an extremely clean tail gas.

ii) The calculated greenhouse gas emissions reduction is approximately 1.4 million metric tons of CO2 equivalents per year (Scope 1) per installation.

iii) The calculation uses a GWP of 281 t CO2e for N2O (reference is the EPA). Formula for calculation: avoided CO2e = avoided N2O * GWP.

CC3.3 Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

CC3.3a Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	200	150000
Implementation commenced*	0	0
Implemented*	150	525000
Not to be implemented	0	0

CC3.3b For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Processes	The activities are primarily energy efficiency activities which have been translated into CO2 (Scope 1+2). In fiscal year 2013/2014, we launched a group-wide energy efficiency program (GEEP) aimed at achieving sustainable efficiency gains of 3.5 TWh by fiscal 2019/2020. The program is being implemented through concrete projects at the individual sites, e.g. through improved utilization of waste heat, reduction of stand-by times, and replacement of plant components. In addition, efficiency and benchmark analyses and expert workshops are carried out on an ongoing basis.	525000	Scope 1 Scope 2	Voluntary	34000000	1300000	1-3 years	Ongoing	The reported monetary savings and invests refer to savings of measures that contain energy (efficiency) related activities.

CC3.3c What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Financial optimization calculations	Focus of energy efficiency measures is to reduce operational costs. All measures are therefore based on financial optimization calculations.

Further Information

CC3.3a: Data as of June 2015. All considered projects are documented in a database base which contains only concrete projects. Therefore the projects "to be implemented" are updated daily. The category "implementation commenced" is not considered in this documentation logic as all effects and sub-projects are counted as "implemented" when effects have already been recorded. Also "not to be implemented" is not considered directly as most measures which are not to be implemented are under continuous investigation.

Page: CC4. Communication

CC4.1 Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document
In mainstream financial reports but have not used the CDSB Framework	Complete	34-40;84-88;94-111	https://www.cdp.net/sites/2015/80/19080/Climate Change 2015/Shared Documents/Attachments/CC4.1/ThyssenKrupp_2013_2014_AR.pdf
In voluntary communications	Underway - previous year attached	GHG emissions graph	https://www.cdp.net/sites/2015/80/19080/Climate Change 2015/Shared Documents/Attachments/CC4.1/GHG emissions website_ThyssenKrupp AG.pdf

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1 Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in regulation

CC5.1a Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Cap and trade schemes	Within the European Emission trading scheme (ETS) the introduction of the MSR and expectations regarding ETS post 2020 can exert an upward pressure on prices already. This could have a negative effect on the operating costs of the steel production.	Increased operational cost	1 to 3 years	Direct	Virtually certain	Low-medium	In the most probable scenario the expected increase of cumulative surcharges may amount up to <50 Mio. € p.a. directly relevant for the margin until the end of the 3rd trading period; thereafter assessments are not reliably possible (estimation as of June 2015).	The implemented management approach is a common group approach with support for effected companies (assets). It includes a constructive political dialogue, cross-industry collaboration, specific operational set-ups to meet requirements for discounts, specific data management & measurements as well as internal capacity building regarding the regulation, such as regular conference calls with our Regional Headquarters. Furthermore, the financial risks management is closely involved the internal processes. All activities especially activities involving cross-industry collaboration are in line with our internal compliance rules.	Directly: permanent staff costs (>10 employees), Indirectly: membership fees of associations. The total costs of this staff refer only partially to this specific risk and they amount up to well below <1% of the risk of <50 Mio €.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Cap and trade schemes	The carbon market of the European Emission trading scheme (ETS) after 2020 has not been defined yet. Potential risks include increased prices for certificates through changed allocation rules, questioning of "carbon leakage" (e.g. of steel production) or even a completely new set-up.	Increased operational cost	>6 years	Direct	Very likely	Medium-high	An estimation of the financial implications is currently not possible. Yet there is no concrete proposal for the post-2020 set-up.	The main approach for ThyssenKrupp to mitigate risks is a constructive political dialogue and cross-industry collaboration to ensure a working and fair carbon market, e.g. by participating in EU consultations.	The associated cost are mainly staff costs for (<10 employees). The total costs of this staff refer only partially to this specific risk and they amount up to well below <1% of the expected risks.
Renewable energy regulation	The German Renewable Energy Act (EEG) is part of the "Energiewende" the German transformation towards renewable power supply. Within these legislations there are several components which effect power prices. Currently disputed is the implementation and interpretation of several clauses.	Increased operational cost	Up to 1 year	Direct	Virtually certain	Low	The disputed clauses represents an additional burden of <50 Mio. € (estimation as of June 2015).	The implemented management approach is a common group approach with support for effected companies (assets). It includes a constructive political dialogue (e.g. discussions with the BMWi), cross-industry collaboration, specific operational set-ups to meet requirements for discounts , specific data management & measurements as well as internal capacity building regarding the regulation. Furthermore the financial risks management is closely involved the internal processes. All activities especially activities involving cross-industry collaboration are in line with our internal compliance rules.	Directly: permanent staff costs (>10 employees), Indirectly: membership fees of associations. The total costs of this staff refer only partially to this specific risk and they amount up to well below <1% of the risk of <50 Mio €.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
International agreements	As stated under the question regarding an international agreement: COP 21 is not expected to deliver a robust global agreement. Rather it will provide a framework for regional and national activities starting afterwards. A key challenge will be to ensure that such individual systems will not be detrimental by impacting negatively on global competitiveness particularly also technologically advanced production sites and solution providers.	Other: combination of risk drivers	Unknown	Direct	Unknown	Unknown	Risks cannot be quantified in advance.	It will be essential to carefully assess the outcome of COP 21 before making any further recommendations for policy adjustments or new policies, certainly ThyssenKrupp will contribute with its expertise where asked.	Directly: permanent staff costs (>10 employees), Indirectly: membership fees of associations. The total costs of this staff refer only partially to this specific risk and they amount up to well below <1% of these risks.

CC5.1e Please explain why you do not consider your company to be exposed to inherent risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

The identification and assessment of risks from physical parameters is fully integrated into our Corporate Risk management. In this process several risks have been identified related to physical parameters of climate change in general, extreme weather events (like tropical storms, snow and ice, hail, heavy rains, etc.) as well as precipitation extremes, extreme temperatures and droughts.

All of these risks have been classified not to be material on Group level. Therefore according to our risk reporting standards in alignment with the CDP Guidance these risks are not considered to "generate a substantive change in our business operations, revenue or expenditure":

- In total, less than 100 risks related to one-time weather events were documented by less than 60 out of more than 500 Group companies (assets).
- All of the risks (even potential temporary stops of operations) documented in the risk management tool are of lower priority regarding the impact and magnitude of risks.
- In total, all of these risks sum up to a financial risk well below 50 Mio. €.

Nevertheless on operation level (asset) these risks might have an effect on operating costs, long-term effects on the production processes and capabilities, supply chain performance as well as measures to mitigate these risks. For all risks mitigation measures and action plans are either already implemented or planned. The scope and structure of insurance cover is determined on the basis of risk assessments in which insurable risks at the Group companies are identified, evaluated and reduced or removed through asset-specific protection plans.

ThyssenKrupp is a diversified industrial company. It does not have any major operations in sectors which are especially affected by physical risks or have sector specific risks. Even in the long-run the risk exposure from physical parameters is not expected to increase significantly even if the number of events increased.

CC5.1f Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

The identification and assessment of other risks related to climate change is as well fully integrated into our Corporate Risk management. (e.g. regarding reputation, recruiting, changing consumer behavior, etc.). All of these risks have been classified not to be material on Group level. Therefore according to our risk reporting standards in alignment with the CDP Guidance these risks are not considered to "generate a substantive change in our business operations, revenue or expenditure":

- All of the risks (including effects from reputation) documented in the risk management tool are of lower priority regarding the impact and magnitude of risks.
- In total, all of these risks sum up to a financial risk well below 50 Mio. €.

Nevertheless on operation level (asset) these risks might have an effect on communication efforts, dialogue, innovation processes or even long-term effects on the production processes or portfolio. For all risks identified mitigation measures and action plans are either already implemented or planned. The scope and structure of insurance cover is determined on the basis of risk assessments in which insurable risks at the Group companies are identified, evaluated and reduced or removed through asset-specific protection plans.

ThyssenKrupp is a diversified industrial company. It does not have any major operations in sectors which are especially affected by other risks related to climate change or have sector specific risks. Even in the long-run the risk exposure to these risks is not expected to increase significantly. Especially regarding changing consumer behavior the issue of climate change presents more an opportunity than a risk (as reported under "opportunities"). Our production facilities have a high efficiency level and our product portfolio is focused on efficient solutions aiming at addressing future customer needs.

Further Information

Page: CC6. Climate Change Opportunities

CC6.1 Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Opportunities driven by changes in regulation
- Opportunities driven by changes in other climate-related developments

CC6.1a Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Time-frame	Direct/ Indirect	Like-lihood	Magnit ude of impact	Estimated financial implications	Management method	Cost of management
Other regulatory drivers	Global regulation on climate change tends to be very specific to certain regions and sectors. So in our markets we can profit from demand for our products induced by CO2 regulation ranging from general emission trading (e.g. EU ETS), product efficiency regulations (CO2 limits for cars), energy efficiency regulations, innovation funds with regard to CO2, local climate action plans, voluntary governmental initiatives, mandatory certification schemes (e.g. LEED), many others and more often also a combination of additive regulations. The opportunities are therefore very specific to the thousands of different products in the different markets. The timeframe of opportunities varies by market and sector from <1 year up to more than 6 years.	Other: Impacts on all aspects of our business, starting from increased demand for existing products to premium prices and opportunities for new markets	Up to 1 year	Indirect (Client)	Virtually certain	High	ThyssenKrupp has put CO2 efficiency in the core of the business strategy as we consider climate change to be a core differentiator in all our markets. Therefore, at least in the long run, we consider close to 100% of our portfolio with an annual turnover of currently 41 Bn € and most of its future growth to be based on our engineering competence regarding efficiency and therefore related to increased demand for "better", meaning more efficient, products induced by regulation and consumer behavior. These opportunities are not considered as an add-on business but future core business.	Technology, Innovation & Sustainability are organized within the same department to ensure that sustainability and climate change aspects are systematically integrated in relevant decision-making, especially in regard to our innovation portfolio. CO2 efficiency, customer demands and relevant climate change regulations are considered in the early stages of the product lifecycle management and product development. ThyssenKrupp has implemented a strategic innovation management which analyses the opportunities for our portfolio and future products with regard to e.g. changing customer behaviour, regulation and general innovation trends. CO2 plays a crucial role in most of these aspects. One example for an outcome for these processes is InCar@plus, which addresses the different drivers of CO2 efficiency in the automotive industry (e.g. light weight).	Major costs of this management approach which is focused on innovation is subsequently associated with our R&D expenditures. The total expenditure on R&D of the Group was 708 million Euros in FY 13/14.

CC6.1c Please describe the inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Time-frame	Direct/ Indirect	Like-lihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behaviour	<p>Many of our existing as well as future customers have set their own targets to increase their CO2 efficiency or to support their customers to reduce their carbon footprint. Therefore, we consider CO2 to become a major competitive differentiator. Subsequently, our customers demand for more CO2 efficient products. The motivation of our customers for this demand is a combination of changing consumer behaviour, energy cost reductions, reputational issues and stronger climate change regulations (e.g. EU ETS, product efficiency regulations, energy efficiency regulations, innovation funds with regard to CO2, local climate action plans, voluntary governmental initiatives, mandatory certification schemes like LEED). The opportunities are therefore very specific to the thousands of different products in the different markets. The timeframe of opportunities varies by market and sector from <1 year up to more than 6 years.</p>	<p>Other: Impacts on all aspects of our business, starting from increased demand for existing products to premium prices and opportunities for new markets</p>	Up to 1 year	Indirect (Client)	Virtually certain	High	<p>ThyssenKrupp has put CO2 efficiency in the core of the business strategy as we consider climate change to be a core differentiator in all our markets. Therefore, at least in the long run, we consider close to 100% of our portfolio with an annual turnover of currently 41 Bn € and most of its future growth to be based on our engineering competence regarding efficiency and therefore related to increased demand for "better", meaning more efficient, products induced by regulation and consumer behavior. These opportunities are not considered as an add-on business but future core business.</p>	<p>Technology, Innovation & Sustainability are organized within the same department to ensure that sustainability and climate change aspects are systematically integrated in relevant decision-making, especially in regard to our innovation portfolio. CO2 efficiency, customer demands and relevant climate change regulations are considered in the early stages of the product lifecycle management and product development. ThyssenKrupp has implemented a strategic innovation management which analyses the opportunities for our portfolio and future products with regard to e.g. changing customer behaviour, regulation and general innovation trends. CO2 plays a crucial role in most of these aspects. One example for an outcome for these processes is InCar@plus, which addresses the different drivers of CO2 efficiency in the automotive industry (e.g. light weight).</p>	<p>Major costs of this management approach which is focused on innovation is subsequently associated with our R&D expenditures. The total expenditure on R&D of the Group was 708 million Euros in FY 13/14.</p>

CC6.1e Please explain why you do not consider your company to be exposed to inherent opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

ThyssenKrupp does not consider itself to gain from opportunities from physical climate parameters on a substantial level. ThyssenKrupp is a diversified industrial. It does not have any major operations in highly effected sectors that gain from physical changes substantially. There are two focuses of the assessment regarding opportunities related to physical climate opportunities -as described in our Group opportunity & risk management- which both in total on a Group level are not considered to be substantive:

- Increasing customer demands for our products from physical changes: Regarding some products we see an increasing demand from physical changes: e.g. heavy plate, some special grades of steel and steel piling are required for water supply as they reduce the losses in the water supply systems; furthermore engineering for mining and industrial production in regions which benefit from higher temperatures present minor market opportunities for ThyssenKrupp.
- Reduction of operational costs from physical changes: Higher temperatures could lead to less energy consumption and costs for heating. We track this effect in our energy management but currently it is not significant. Also physical changes present opportunities for some suppliers and customers (e.g. for mining companies). But on a global scale the benefits and negative effects from physical changes seem to be low and balanced. In total we therefore do not see significantly reduced operational costs.

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1 Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Mon 01 Oct 2012 - Mon 30 Sep 2013	26700000
Scope 2	Mon 01 Oct 2012 - Mon 30 Sep 2013	1800000

CC7.2 Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

CC7.3 Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)

CC7.4 Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Natural gas	0.202	metric tonnes CO2e per MWh	IPCC 2006 Stationary Combustion
Coke oven coke	0.385	metric tonnes CO2e per MWh	IPCC 2006 Stationary Combustion (+local measurements)
Coke oven gas	0.160	metric tonnes CO2e per MWh	IPCC 2006 Stationary Combustion
Coking coal	0.341	metric tonnes CO2 per MWh	IPCC 2006 Stationary Combustion (+local measurements)

Page: CC8. Emissions Data - (1 Oct 2013 - 30 Sep 2014)

CC8.1 Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Financial control

CC8.2 Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

32000000

CC8.3 Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

1700000

CC8.4 Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

CC8.4a Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of Scope 2 emissions excluded from this source	Explain why the source is excluded
Operations from the VDM Group	Emissions excluded due to a recent acquisition	Emissions excluded due to a recent acquisition	The VDM Group was re-integrated in the mid of last fiscal year and is already under divestment. Aligned with our audit company these emissions are not shown in our balance for consistency reasons.

CC8.5 Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	Less than or equal to 2%	Extrapolation	For smaller group companies with far below 1% of emissions estimations have been made.
Scope 2	Less than or equal to 2%	Extrapolation	For smaller group companies with far below 1% of emissions estimations have been made.

CC8.6 Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance complete

CC8.6a Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Limited assurance	https://www.cdp.net/sites/2015/80/19080/Climate Change 2015/Shared Documents/Attachments/CC8.6a/TK_2014_CDP_verification_template_20150522_final.pdf	Pages 1-3	ISAE3000	100

CC8.7 Please indicate the verification/assurance status that applies to your reported Scope 2 emissions

Third party verification or assurance complete

CC8.7a Please provide further details of the verification/assurance undertaken for your Scope 2 emissions, and attach the relevant statements

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Limited assurance	https://www.cdp.net/sites/2015/80/19080/Climate_Change_2015/Shared Documents/Attachments/CC8.7a/TK_2014_CDP_verification_template_20150522_final.pdf	Pages 1-3	ISAE3000	100

CC8.9 Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

Page: CC9. Scope 1 Emissions Breakdown - (1 Oct 2013 - 30 Sep 2014)

CC9.1 Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e
Europe	22200000
Rest of world	9800000

Page: CC10. Scope 2 Emissions Breakdown - (1 Oct 2013 - 30 Sep 2014)

CC10.1 Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted for in CC8.3 (MWh)
Europe	1300000	3700000	3500
Rest of world	400000	800000	1300

Page: CC11. Energy

CC11.1 What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

CC11.2 Please state how much fuel, electricity, heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Fuel	94000000
Electricity	3800000
Heat	600000
Steam	60000
Cooling	0

CC11.3 Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Other: Reduction Agents (coke+coal)	82300000
Other: Different other fuels (e.g. natural gas)	11600000

CC11.4 Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the Scope 2 figure reported in CC8.3

Basis for applying a low carbon emission factor	MWh associated with low carbon electricity, heat, steam or cooling	Comment
Tracking instruments, Guarantees of Origin	4800	

Further Information

ThyssenKrupp consumes, generates and exports energy. This complex energy balance cannot be entered adequately within the input-focused CDP template. So the split e.g. between fuels and electricity only reflects the input not the consumption.

Page: CC12. Emissions Performance

CC12.1 How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

CC12.1a Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Comment
Emissions reduction activities	1.8	Decrease	Emission reduction activities of our GEEP initiative (energy efficiency/ CO2 target): In the last fiscal year, we reduced our scope 1 and 2 emissions by 525000 t CO2. Therefore, we arrive at a reduction of 1.8% to the base year emissions of 28.5 Mio. t CO2 ($0.525/28.5 = 1.8\%$)
Divestment	1.1	Decrease	
Acquisitions	2.4	Increase	
Mergers	0	No change	
Change in output	1.9	Increase	
Change in methodology	0	No change	
Change in boundary	15.5	Increase	Due to changes in the accounting rules according to IFRS, ThyssenKrupp's share in the steel mill Hüttenwerke Krupp Mannesmann needs to be balanced as Scope 1+2.
Change in physical operating conditions	0.01	Decrease	
Unidentified	0	No change	
Other	1.1	Increase	These changes refer to a broad set of reasons like change of production processes, changes in the electricity grid factors or changes of the portfolio of products.

CC12.2 Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
0.0008	metric tonnes CO2e	unit total revenue	4	Decrease	Emission reduction activities (reported changes already consider changed boundary)

CC12.3 Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per full time equivalent (FTE) employee

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
209	metric tonnes CO2e	FTE employee	1	Decrease	Emission reduction activities (reported changes already consider changed boundary)

CC12.4 Please provide an additional intensity (normalized) metric that is appropriate to your business operations

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
1.86	metric tonnes CO2e	tonne of steel	4	Decrease	Emission reduction activities (reported changes already consider changed boundary)

Page: CC13. Emissions Trading

CC13.1 Do you participate in any emissions trading schemes?

Yes

CC13.1a Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
European Union ETS	Wed 01 Jan 2014 - Wed 31 Dec 2014	18671286	0	15992306	Facilities we own and operate
European Union ETS	Wed 01 Jan 2014 - Wed 31 Dec 2014	12076	0	2808185	Facilities we operate but do not own

CC13.1b What is your strategy for complying with the schemes in which you participate or anticipate participating?

As part of the European Emissions Trading System that started in 2005 involved group companies have installed monitoring systems to measure and calculate their CO2 emissions which are covered by the legislation. Furthermore ThyssenKrupp has an operational emissions trading strategy in place which aims to cover "short" positions at the least possible costs and at controllable risks. Speculative and "trading" activities are not part of the strategy. ThyssenKrupp AG has established a viable market access, including membership at the Intercontinental Exchange (ICE) and the European Energy Exchange (EEX). In addition ThyssenKrupp AG tries to reduce emissions through involvement in CDM- and JI-projects and maximizes the business possibilities from CER/ERU use e.g. by executing CER-/ERUEUA-Swaps. A central department of ThyssenKrupp Steel Europe AG is in charge of emissions trading (globally) creating synergies in the related trading of emissions and energy.

CC13.2 Has your organization originated any project-based carbon credits or purchased any within the reporting period?

Yes

CC13.2a Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
Credit Purchase	Other: various projects	Project-based carbon credits are used for compliance in situations of under-allocation. Exact project names, volumes and vintages are reported only internally due to confidentiality obligations concerning the emissions trading strategy. ThyssenKrupp is engaged in more than 100 different CDM and JI projects through direct participation, CO2 funds or as technology provider. The CERs/ERUs have been or will be verified according to approved CDM baseline methodologies (http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html) Exact project names, volumes and vintages that have been purchased cannot be published as this would be in conflict with confidentiality obligations and may eventually reveal ThyssenKrupp's emission position or its emission trading strategy. However an overview of all issued CER is given by the UNFCCC (http://cdm.unfccc.int/Issuance/cers_iss.html)	CDM (Clean Development Mechanism)			Not relevant	Compliance

Further Information

ETS figures are reported according to the accounting boundary of the Fiscal Year 13/14 (w/o VDM which is under divestment). "Allowances purchased" (13.1a) cannot be reported for compliance reasons. Any disclosure would reveal market positions or trading strategies, and could be interpreted as signaling. A virtual balance for the period justifies to considered zero net purchased allowances. The time gap between allocation and surrendering of certificates allows to meet even a substantial shortage without purchasing. This can be done among other options by using parts of "next year's" allocation to close the allocation gap.

Page: CC14. Scope 3 Emissions

CC14.1 Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, not yet calculated				As of June 2015 the total Scope 3 emissions from purchased goods and services were already under evaluation but not finalized for reporting. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Capital goods	Not relevant, explanation provided				As of June 2015 the general the Scope 3 emissions associated with capital goods are not considered relevant on a Group level in terms of KPI-based management. Sample assessments within several Lifecycle Assessments have shown only minimal effects from capital goods on lifecycle emissions of our products. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	5300000	According to the GHG protocol corporate value chain standard fuel- and energy-related emissions are calculated for all material fuel-and-energy sources (>1% of total energy consumption) which sum up to more than 99% of the total energy consumption. This is especially coke, coal, electricity and natural gas. The data of the energy consumption from these sources comes from the environmental data collection. It is same energy data as it was used for calculating the verified Scope 1+2 emissions. Also this category of Scope 3 was part of the verification of emissions (incl. a plausibility check of the applied factors). So the quality of the data and the data collection process is very high. The fuel- and energy-related Scope 3 emissions (which are not already included in Scope 1 or 2) are already calculated automatically for each Group Company within the IT system of the environmental data collection. The IT system uses standard emissions factors for this category of Scope 3.	100.00%	Energy-related related Scope 3 emissions are indirectly managed through our energy efficiency program. Reduction activities contribute to Scope 1, Scope 2 as well as this specific Scope 3 category.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Upstream transportation and distribution	Not relevant, explanation provided				As of June 2015 the total Scope 3 emissions from upstream transport are not considered relevant KPIs on a Group level in terms of KPI-based management. Sample assessments within several Lifecycle Assessments have shown only minimal effects from upstream transportation on lifecycle emissions of our products. Nevertheless this category of Scope 3 emissions is being assessed for relevant products to identify hot-spots and to be included in Lifecycle Assessments' calculations, R&D and strategic processes. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Waste generated in operations	Not relevant, explanation provided				In general, the Scope 3 emissions associated with waste are not considered relevant on a Group level in terms of KPI-based management. 61% of our waste is recycled without associated emissions. And even the waste for disposal consists for a major of mineral slags from the steel production which do not cause emissions when being disposed. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Business travel	Not relevant, calculated	310000	Scope 3 emissions from business travel have been calculated according to the GHG protocol corporate value chain standard. For the emission factor, there have been considered average distances and modes of business trips. All other data has been withdrawn from our IT system, including countries and employee numbers for all our TK Group companies.	0%	Scope 3 from Business travel is not considered relevant in relative terms. A major part of business travel is related to service operations with own vehicles which are included in the Scope 1 figures. Furthermore in Germany all business travel with trains is CO2 neutral. Also public transport for short distances is supported in several programs.
Employee	Not relevant,	290000	Scope 3 emissions from employee commuting have	0%	Scope 3 from employee commuting is not

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
commuting	calculated		been calculated according to the GHG protocol corporate value chain standard. There has been used the average-data method, involving estimates on average data on commuting patterns. All other data has been withdrawn from our IT system, including countries and employee numbers for all our TK Group companies.		considered relevant in relative terms. Nevertheless for some group companies, e.g. in China and Brazil, nevertheless the CO2-intensity of commuting is reduced by providing transport capacities (mainly busses). Furthermore public transport for commuting is supported in several programs (e.g. with job tickets).
Upstream leased assets	Not relevant, calculated	0	The relevant upstream emissions related to leased assets are already included in Scope 1 and Scope 2 emissions of ThyssenKrupp as reported to the CDP aligned with the financial reporting according to IFRS and the GHG protocol. Therefore no Scope 3 emissions can be associated with these assets.	0%	The relevant upstream emissions related to leased assets are already included in Scope 1 and Scope 2 emissions of ThyssenKrupp as reported to the CDP aligned with the financial reporting according to IFRS and the GHG protocol. Therefore no Scope 3 emissions can be associated with these assets.
Downstream transportation and distribution	Not relevant, explanation provided				As of June 2015 the total Scope 3 emissions from downstream transport are not considered relevant KPIs on a Group level in terms of KPI-based management. Sample assessments within several Lifecycle Assessments have shown only minimal effects from downstream transportation on lifecycle emissions of our products. Nevertheless this category of Scope 3 emissions is being assessed for relevant products to identify hot-spots and to be included in Lifecycle Assessments' calculations, R&D and strategic processes. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Processing of sold products	Not relevant, explanation provided				As of June 2015 total Scope 3 emissions from processing are not considered relevant KPIs on a Group level in terms of KPI-based management. Several sample assessments within several Lifecycle Assessments have shown only minimal

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					effects from processing on lifecycle emissions of our products. Nevertheless this category of Scope 3 emissions is being assessed for relevant products to identify hot-spots and to be included in Lifecycle Assessments' calculations, R&D and strategic processes. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Use of sold products	Relevant, not yet calculated				As of June 2015 the total Scope 3 emissions from use of sold products were already under evaluation but not finalized for reporting. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
End of life treatment of sold products	Not relevant, explanation provided				Most products of ThyssenKrupp are either directly materials which can be recycled (like steel) easily or products with a high content of materials which can be recycled (steel and other metals), e.g. installations or elevators. In line with the GHG protocol the recycling process of metals is accounted as being part of the next lifecycle. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Downstream leased assets	Not relevant, explanation provided				Material downstream emissions related to leased assets are already included in Scope 1 and Scope 2 emissions of ThyssenKrupp as reported to the CDP aligned with the financial reporting according to IFRS. Therefore no Scope 3 emissions can be associated with these assets. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Franchises	Not relevant,	0	ThyssenKrupp does not license relevant franchise	100.00%	ThyssenKrupp does not license relevant

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	calculated		operations. Therefore these emissions are considered to be 0.		franchise operations. Therefore these emissions are considered to be 0.
Investments	Not relevant, explanation provided				ThyssenKrupp did not have any investments in the reporting year with relevance for Scope 3. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Other (upstream)	Not relevant, explanation provided				In general, the Scope 3 emissions associated with other upstream are not considered relevant on a Group level in terms of KPI-based management. Any such emissions would be considered under another concrete Scope 3 category. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.
Other (downstream)	Not relevant, explanation provided				In general, the Scope 3 emissions associated with other downstream are not considered relevant on a Group level in terms of KPI-based management. Any such emissions would be considered under another concrete Scope 3 category. ThyssenKrupp is continuously monitoring the relevance of the different categories of Scope 3 emissions.

CC14.2 Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

Third party verification or assurance complete

CC14.2a Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of Scope 3 emissions verified (%)
Limited assurance	https://www.cdp.net/sites/2015/80/19080/Climate_Change_2015/Shared Documents/Attachments/CC14.2a/TK_2014_CDP_verification_template_20150522_final.pdf	Pages 1-3	ISAE3000	90

CC14.3 Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Emissions reduction activities	1.5	Decrease	Fuel- and energy related Scope 3 emissions decreased with the efficiency gains from our energy efficiency program GEEP and the related target. (see targets&initiatives)
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Other: Re-integration and new accounting standard	14.4	Increase	As explained already for Scope 1+2 emissions the reintegration of some activities and a different accounting according to IFRS had a major effect on Scope 1+2 emissions and subsequently also on Scope 3 from fuel- and energy related activities.

CC14.4 Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers
Yes, our customers

CC14.4a Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

ThyssenKrupp is engaged on a number of climate change related issues with customers and suppliers through various channels.

Customers:

- Following our More&Better strategy and the reported opportunities we are focused on advancing our customers with innovations with outstanding CO2 efficiency. Therefore a major engagement and dialogue is related to innovations and designing the best solutions for customers. For example our InCar Plus project (with CO2 efficient solutions) is presented to various customers in a global roadshow. Furthermore we provide relevant CO2 data to our customers, e.g. for Lifecycle inventories or within CDP

Supply Chain Program. The performance measurement of these activities includes different aspects ranging from order intake to supplier ratings of our customers.

Suppliers:

Regarding suppliers the main engagement regarding sustainability issues is within the Supplier Code of Conduct process which includes climate change in general (not focused on reduction but general climate change management). Focus of the process is risk management based on three key elements:

- ThyssenKrupp Supplier Code of Conduct
- Risk analysis: Early risk identification is supported by risk analyses, self-assessments and event-related audits. This also allows us to monitor compliance with the principles and requirements laid out in the ThyssenKrupp Supplier Code of Conduct.
- Supplier development: To us, supplier development is a process together with our suppliers. Findings from a risk analysis may lead to a mutual action plan with a supplier to address specific risk areas.

The priority is at suppliers with high procurement volumes and high risks related to the Code of Conduct (which includes climate change issues) based on the risk assessments. Success of these activities is primarily measured by the signatory rate of the Code of Conduct and by the outcomes of audits.

CC14.4b To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend	Comment
8000	90%	

CC14.4c If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details
Other	We mainly use inventory CO2 emissions data from our suppliers to calculate the lifetime CO2 emissions of concrete products, for example associated with the procurement of materials and components. Furthermore, different sets of suppliers' GHG data is used for calculating different categories of scope 3 emissions (e.g. fuel and energy related emissions).

Module: Sign Off

Page: CC15. Sign Off

CC15.1 Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Dr.-Ing. Heinrich Hiesinger	Chairman of the Executive Board (CEO)	Chief Executive Officer (CEO)