

Module: Introduction**Page: Introduction****0.1****Introduction**

Please give a general description and introduction to your organization

Rio Tinto is a leading international mining and metals group, combining Rio Tinto plc, a London listed public company headquartered in the UK, and Rio Tinto Limited, which is listed on the Australian Stock Exchange, with executive offices in Melbourne. The two companies are joined in a dual listed companies (DLC) structure as a single economic entity, called the Rio Tinto Group.

The Group finds, mines and processes the earth's mineral resources - metals and minerals essential for making thousands of everyday products that meet society's needs and contribute to improved living standards. To deliver superior returns to shareholders over time, Rio Tinto takes a long term and responsible approach to the Group's business. Thus Rio Tinto's strategy is to invest in and operate large, long term, cost competitive mines and businesses, driven not by choice of commodity but rather by the quality of each opportunity.

The Group's major products include aluminium, alumina, copper, diamonds, energy products, gold, industrial minerals (borates, titanium dioxide, salt and talc), and iron ore. Its activities span the world but are strongly represented in Australia and North America. There are also significant businesses in South America, Asia, Europe and southern Africa.

Wherever Rio Tinto operates, health and safety is a core value. Group businesses also put sustainable development at the heart of their operations. They work as closely as possible with host countries and communities, respecting their laws and customs. For Rio Tinto it is important that the environmental effects of its activities are kept to a minimum and that local communities benefit as much as possible from operations.

0.2**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
Fri 01 Jan 2010 - Fri 31 Dec 2010

0.3

Country list configuration

Please select the countries for which you will be supplying data. This selection will be carried forward to assist you in completing your response

Select country
Australia
Canada
Iceland
United Kingdom
United States of America
France
Netherlands
New Zealand

0.4

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.

USD(\$)

0.5

Please select if you wish to complete a shorter information request

0.6

Modules

As part of the Investor CDP information request, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sectors and companies in the oil and gas industry should complete supplementary questions in addition to the main questionnaire.

If you are in these sectors (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will be marked as default options to your information request. If you want to query your classification, please email respond@cdproject.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.cdproject.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

Module: Management [Investor]

Page: 1. Governance

1.1

Where is the highest level of direct responsibility for climate change within your company?

Individual/Sub-set of the Board or other committee appointed by the Board

1.1a

Please identify the position of the individual or name of the committee with this responsibility

Committee on social and environmental accountability (CSEA)

Purpose: The objective of the Committee is to oversee on behalf of the Board management processes, standards and strategies designed to manage social and environmental risks and achieve compliance with social and environmental responsibilities and commitments.

The Committee comprises three or more independent non-executive directors who are appointed by the Board. The Committee Chair is an independent director appointed by the Board. The Global Head of Health, Safety, Environment and Communities attends all meetings.

Reporting procedures:

- The CSEA Committee regularly reports to the Board of Directors on the matters discussed and the minutes of each Committee meeting shall be received by the Board.
- The Committee will report to the Board on its work in discharging its responsibilities during the year and the outcomes of its formal annual review.
- Further, the Committee Chair (or another Committee member nominated by the Committee Chair) will attend the annual general meetings of the companies to respond to any shareholder questions on the Committee's activities.

1.2

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

Yes

1.2a

Please complete the table

Who is entitled to benefit from these incentives?	The type of incentives	Incentivised performance indicator
Chief Executive Officer (CEO)	Monetary reward	Drive sector leadership role in climate change issues Greenhouse gas emissions intensity and associated target acts as an indicator of improved performance.
Energy managers	Monetary reward	Greenhouse gas emissions intensity, energy efficiency
Environment/sustainability managers	Monetary reward	Greenhouse gas emissions intensity, energy efficiency
Executive officer	Monetary reward	Demonstrate progression of the climate and energy strategy

2.1

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

2.1a

Please provide further details (see guidance)

Rio Tinto has a standard in-house system of risk management that applies throughout the company to identify all operational (asset level) and strategic (Group level) risk and opportunity. The process is coordinated by Group Risk. However the risk owners are the operating leadership of the relevant Product Group.

Rio Tinto risk analysis and management must follow a uniform process as defined by "Risk policy and standard" to ensure consistency and high quality. The process includes six elements:

1. Risk process initiation
2. Risk identification
3. Risk evaluation
4. Risk management
5. Risk reporting
6. Risk updates

The risk identification and evaluation provides a risk register for each part of the business, which is used as a management tool. The rating of risks is conducted through a standardised matrix taking into account likelihood and consequence. Depending on the category of risk, measures used to rate the consequence of risk include economic (capital expenditure, schedule, operating cost, production volumes, revenue) and non-economic parameters (personnel safety, health impact, environmental impact, community impact, compliance impact, Rio Tinto or business unit reputation).

By providing an overall methodology and structure for the handling of risk within the organisation, the Group seeks to provide the board and senior management with a consistent, Group wide perspective of the key risks. Reports are submitted to the board twice per year for material risks. Furthermore, climate change risks are reviewed on a continuous basis within product groups and functions, and those of a material nature (those that pose significant risk to the achievement of Group-wide objectives) are reviewed and reported upon to the Rio Tinto Risk Management Committee on a quarterly basis.

Material, Group-wide risks are reviewed by a multi-disciplinary corporate team and disclosed in the annual report. As part of this process regulatory risks posed by climate change have been identified as a high or critical risk and this has been disclosed in the Group annual report.

The degree to which these affect the business are assessed in the following ways:

1. A global and regional policy reviews, including external input, assesses the likely regulatory trends
2. A trajectory analysis assesses the Group's forecast emissions per jurisdiction
3. Business modelling is used to assess the cost of various policy scenarios, where detailed draft policy exist
4. Large projects are required to consider the impact of carbon costs in their evaluation.

Additionally, the vulnerability of Group operations to possible effects of climate change including droughts, floods, sea-level rise and storm is included into the principal risk register of the 2010 Annual Report. Extensive climate modelling has been undertaken to support businesses in identifying and assessing the physical risks associated with climate change relevant to the region of operation.

2.2

Is climate change integrated into your business strategy?

Yes

2.2a

Please describe the process and outcomes (see guidance)

Rio Tinto's vision and core objective is to maximise shareholders return by sustainably finding, mining and processing natural resources. The underpinning business strategy is to invest in and operate large, long term, cost competitive mines and businesses, driven not by choice of commodity but rather by the quality of each opportunity (2010 annual report p. 18).

A fundamental part of this is to deliver value while operating in an ethically and socially responsible manner, and remaining committed to long term sustainable development.

Rio Tinto's global code of business conduct, "The way we work", reinforces the commitment to integrate sustainable development thinking in the way it makes decisions about finding, acquiring, developing, and operating assets around the world. This approach begins with Rio Tinto's corporate policies and positions, which are strengthened by strategies and standards that lay down the minimum acceptable requirements for behaviour or operating conditions. These policies are also supported by a range of leadership tools and accountabilities to ensure appropriate implementation across the Group.

More specifically, Rio Tinto's internal standards on HSEQ Management System and on Greenhouse Gas Emissions outline guidance of the underlying requirements to ensure continuous improvement in GHG emission reductions in Rio Tinto. This includes improved efficiency in energy use by identifying GHG sources, evaluating and prioritising them according to significance, and then designing and implementing a greenhouse gas and energy efficiency action plan containing the appropriate control, reduction and mitigation measures.

Achievement of Rio Tinto's strategy and goals is measured by a set of key performance indicators (KPIs). Since 2008 one of these seven KPI's is Rio Tinto's total GHG emissions intensity. A public target is set to reduce the total GHG emissions intensity KPI by six per cent between 2008 and 2013. A further four per cent reduction is targeted to give an overall ten per cent reduction by 2015. Rio Tinto has set public targets to reduce its Group emissions intensity since 1998.

Further, Rio Tinto corporate position on climate change accepts the need for climate change action and recognises the issue as being one of the greatest challenges and opportunities to Rio Tinto . To address these risks and opportunities Rio Tinto's climate change programme includes initiatives in three key areas:

1. Reducing emissions from our operations: short term by energy efficiency and emissions reductions programs and longer term by developing and investing into low emissions technologies for step change opportunities
2. Understanding and developing low emission product pathways by working with others on supply chain emissions and on breakthrough technologies.
3. Engaging with governments and stakeholders to advocate sound and efficient domestic and international policies.

One of Rio Tinto's strategic advantages is access to clean power sources used for 72 per cent of the electricity required to produce primary aluminium, including a strong base of renewable, self generated hydropower. This gives its aluminium products a relatively low carbon footprint from a production standpoint, This is in addition to aluminium's potential in applications that result in fuel efficiency improvements and downstream GHG reductions (eg in cars, trucks, trains and aircraft). Also, the development of our AP Technology™ has the potential to further reduce the energy required to produce aluminium and thus providing further advantages in a carbon constrained marketplace.

Rio Tinto's strategy is influenced by risks and uncertainties that could materially affect its operations. One such risk is Government direct or market based regulation of greenhouse gas emissions adversely affecting the Group's cost of operations.

Top down direction has driven the integration of climate change into Rio Tinto's business strategy by the Board, the Board's sub Committee on Social and Environmental Accountability (CSEA) and the Executive Committee under the leadership of the chief executive. In addition, the Global Head of Health, Safety, Environment and Communities regularly briefs the CSEA and the Executive Committee on relevant climate change risks and opportunities, which assists decision making on how climate change influences Rio Tinto's business strategy.

All substantial investment decisions are informed by the climate change driven aspects of the strategy for example as a result of applying an internal price of carbon to all project evaluations and to the annual business planning process.

2.2b

Please explain why not

2.3

Do you engage with policy makers to encourage further action on mitigation and/or adaptation?

Yes

2.3a

Please explain (i) the engagement process and (ii) actions you are advocating

Text answer to cover: engagement method, topic and nature (see guidance) and the actions advocated. All 4 data-points must be given to score 2 points.

Rio Tinto engages with policy makers across various regions, including:

North America: In the US Rio Tinto has engaged on a variety of energy and climate policies on the federal and regional level. The Rio Tinto position is that it supports a energy and resource policy that reduces greenhouse gas (GHG) emissions through use of market based mechanisms.

Australia: Rio Tinto in Australia remains actively engaged on climate change and energy (energy efficiency, renewable energy and energy supply policy) related national and relevant state and territory policy frameworks and design details. Participation is through written submissions following release of government discussion documents, direct representation on specific design detail and invited membership onto Government sponsored task groups and roundtables. The Managing Director Rio Tinto Australia is a government invited representative on the Government Roundtable for carbon pricing and the Industry Transitional Assistance Working Group. Rio Tinto in Australia supports the use of market based mechanisms that recognise the vulnerability of the trade exposed sector to international competition until vast majority of global emissions are covered by comparable policies. Rio Tinto also works through trade associations to promote a common industry approach to emissions mitigation policy development.

New Zealand: Engagement with policy makers is both direct and through a trade association - the Greenhouse Policy Coalition. The engagement largely on the content and future direction of existing legislation is public (fora, written and oral submissions, membership of technical advisory groups) and private (direct engagement with Officials, Ministerial Advisors and the Minister). During this engagement process Rio Tinto engaged by responding to consultation documents, assisting Officials through participation in technical working groups and more general one-on-one meetings with government officials. The advice given is focused on amending legislation and developing technical aspects of the ETS.

Europe: In the EU Rio Tinto has mainly engaged policymakers through various industry bodies. The focus of engagement was the effect of the EU ETS on the aluminium industry.

Page: 3. Targets and Initiatives

3.1

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

Intensity target

3.1a

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
----	-------	-------------------------	----------------------------	-----------	--	-------------	---------

3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Base year emissions (metric tonnes CO2e)	Target year	Comment
1	Scope 1+2	95%	6%	Other: Aggregated per cent reduction of emissions per unit of product	2008	49800000	2013	The non target Group excludes the following activities, which in 2008 was equivalent to approximately 5 per cent of Rio Tinto's total emissions (2 per cent in 2010): Projects under development (eg HIsmelt, Simandou) Standalone power generation for smelting (eg Kemano) Shipping Exploration Small independent facilities below 50kt CO2-e
2	Scope 1+2	95%	10%	Other: Aggregated per cent reduction of emissions per unit of product	2008	49800000	2015	This target aims a further four per cent reduction by 2015 in addition to the six per cent, to deliver an overall ten per cent reduction. The non target Group excludes the following activities, which in 2008 was equivalent to 5 per cent of Rio Tinto's total emissions (2 per cent in 2010): Projects under development (eg HIsmelt, Simandou) Standalone power generation for smelting (eg Kemano) Shipping Exploration Small independent facilities below 50kt CO2-e

3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comments
1	Decrease	6%			The suggested decrease in absolute emissions assumes 2008 production levels. Within an energy intensive business such as Rio Tinto, GHG emissions forecasts are a proxy for production. Rio Tinto is not able to publicly disclose specific forecasts of costs and forward looking statements due to strict legal and commercial sensitivity associated with such statements.
2	Decrease	10%			The suggested decrease in absolute emissions assumes 2008 production levels. Within an energy intensive business such as Rio Tinto, GHG emissions forecasts are a proxy for production. Rio Tinto is not able to publicly disclose specific forecasts of costs and forward looking statements due to strict legal and commercial sensitivity associated with such statements.

3.1d

Please provide details on your progress against this target made in the reporting year

ID	% complete (time)	% complete (emissions)	Comment
1	40%	62%	Note that performance in 2010 does not indicate per cent completeness of intensity reduction against target in 2013 because progress against target is not linear.
2	29%	37%	Note that performance in 2010 does not indicate per cent completeness of intensity reduction against target in 2015 because progress against target is not linear.

3.1e

Please explain (i) why not; and (ii) forecast how your emissions will change over the next five years

3.2

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

Yes

3.2a

Please provide details (see guidance)

Rio Tinto is committed to helping develop low GHG emissions pathways that will allow our products to continue to meet the needs of society. Our businesses will contribute to this goal in a number of ways:

Rio Tinto is one of the world's largest suppliers of uranium, used in the production of low carbon power generation. The energy value of uranium mined by the Group in 2010 was 3492 PJ (Source: 0.47 PJ/t - Australian NGER Determination 2009 Schedule 1 Part 7). If this energy had to be supplied using coal fired power it would have generated emissions of around 315 million tonnes CO₂-e during the 2011. Origination credits are not allocated for the scope 3 emissions avoidance. The timescale of these avoided emissions are over the life of uranium operations, which may extent for several decades. However, avoided emissions and the timescale depend on future mine planning.

The use of borate improves the performance of insulation fibreglass. The European Insulation Manufacturers Association published a life cycle assessment stating that for every BTU used in manufacturing insulation fibreglass, 12 BTUs are saved in the first year of installation. The use of HAR (high aspect ratio) talc in motor vehicles improves fuel efficiency. 6 t CO₂-e is saved for every 1 tonne of HAR talc used.

Rio Tinto Alcan' AP series smelting technology, which is sold to third parties, is the most efficient in the industry for GHG emissions and energy. The use of RTA aluminium in the transportation and building applications contributes directly to the reduction of GHG emissions and energy consumption through light weighting and more energy efficient buildings.

Rio Tinto has spent tens of millions of dollars on Hydrogen Energy California, which is a carbon capture and storage project. After three years of co-developing the project, Rio Tinto has decided to exit as the project does not meet our criteria for further investment. The main driver for the decision is the significant capital requirements for the project without sufficient offsetting revenue from secured power purchase agreements.

Rio Tinto is also promoting the use of copper in high efficiency electrical motors, and supporting increased electrification as a cost effective contributor to GHG emissions abatement.

3.3

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

3.3a

Please provide details in the table below

Activity type	Description of activity	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
Other	Sixty three aggregated energy efficiency opportunities with a payback period of less than 1 year have been implemented or the implementation has commenced via a mandatory assessment process under the Australian Government Energy Efficiency Opportunities programme. These aggregated initiatives reported represent annual scope 1 and 2 emissions reductions of 196,000 tonnes CO2-e. The activity types for these initiatives are wide ranging and include behavioural change, energy efficiency (building and processes), transportation (fleet and use), and process emissions reductions. The Energy Efficiency Opportunities Act (EEO) is an Australian Federal Government legislation that requires large energy using corporations that use more than 0.5PJ to conduct rigorous and comprehensive energy efficiency assessments and, report publicly and to the government on the outcomes of those assessments. While the assessment of opportunities is mandatory, the implementation of the identified opportunities and the resulting emissions reductions are voluntary.			<1 year
Other	Twenty eight aggregated energy efficiency opportunities with a payback period of 1 to 2 years have been implemented or the implementation has commenced via a mandatory assessment process under the Australian Government Energy Efficiency Opportunities programme. These aggregated initiatives reported represent scope 1 and 2 emissions reductions of 116,000 tonnes CO2-e. The activity types for these initiatives are wide ranging and include behavioural change, energy efficiency (building and processes), and process emissions reductions. The Energy Efficiency Opportunities Act (EEO) is an Australian Federal Government legislation that requires large energy using corporations that use more than 0.5PJ to conduct rigorous and comprehensive energy efficiency assessments and, report publicly and to the government on the outcomes of those assessments. While the assessment of opportunities is mandatory, the implementation of the identified opportunities and the resulting emissions reductions are voluntary.			1-3 years
Other	Twenty one aggregated energy efficiency opportunities with a payback period of over 3 years have been implemented or the implementation has commenced via a mandatory assessment process under the Australian Government Energy Efficiency Opportunities programme. These aggregated initiatives reported represent scope 1 and 2 emissions reductions of 317,000 tonnes CO2-e. The activity types for these initiatives are wide ranging and include behavioural change, energy efficiency (building and processes), transportation (fleet and use), and process emissions reductions. The Energy Efficiency Opportunities Act			>3 years

Activity type	Description of activity	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
	(EEO) is an Australian Federal Government legislation that requires large energy using corporations that use more than 0.5PJ to conduct rigorous and comprehensive energy efficiency assessments and, report publicly and to the government on the outcomes of those assessments. While the assessment of opportunities is mandatory, the implementation of the identified opportunities and the resulting emissions reductions are voluntary.			

3.3b

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Internal price of carbon	
Compliance with regulatory requirements/standards	
Internal incentives/recognition programs,	
Employee engagement	
Other	Rio Tinto has a comprehensive internal climate change and energy programme in place.

3.3c

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Please note that the aggregate number of projects identified under the Energy Efficiency Opportunities (EEO) act is 535 (see question 3.3a). The subset of these projected as shown excludes projects, which are not to be implemented or have not yet commenced.

4.1

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

Publication	Page/Section Reference	Identify the attachment
In annual reports (complete)	Page 34/35 and throughout annual report	riotinto_2010_ara.pdf
In voluntary communications (complete)		Climate Change disclosure - Webpages.docx

Attachments

[https://www.cdproject.net/Sites/2011/29/15829/Investor CDP 2011/Shared Documents/Attachments/InvestorCDP2011/4.Communication/Climate Change disclosure - Webpages.docx](https://www.cdproject.net/Sites/2011/29/15829/Investor%20CDP%202011/Shared%20Documents/Attachments/InvestorCDP2011/4.Communication/Climate%20Change%20disclosure%20-%20Webpages.docx)
[https://www.cdproject.net/Sites/2011/29/15829/Investor CDP 2011/Shared Documents/Attachments/InvestorCDP2011/4.Communication/riotinto_2010_ara.pdf](https://www.cdproject.net/Sites/2011/29/15829/Investor%20CDP%202011/Shared%20Documents/Attachments/InvestorCDP2011/4.Communication/riotinto_2010_ara.pdf)

Module: Risks and Opportunities [Investor]

Page: 5. Climate Change Risks

5.1

Have you identified any climate change risks (current or future) that have potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Risks driven by changes in regulation
- Risks driven by changes in physical climate parameters
- Risks driven by changes in other climate-related developments

5.1a

Please describe your risks driven by changes in regulation

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
1	International agreements	Two of Rio Tinto's operations are currently liable under the second phase of the EU emissions trading scheme. This exposure will increase with the third phase from 2013 onwards to include a number of Rio Tinto Alcan operations currently exempt.	Increased operational cost	1-5 years	Direct	Virtually certain	Low
2	Carbon taxes	Draft legislation is stated to be introduced by the Australian government regarding a carbon pricing mechanism, which may be converted to a emissions trading scheme. With 45 per cent of Rio Tinto Group emissions in Australia this has a significant impact with increased operational cost.	Increased operational cost	1-5 years	Direct	Likely	Medium-high
3	Voluntary agreements	Rio Tinto Alcan has entered into voluntary agreements with Provincial governments to reduce emissions.	Increased operational cost	Current	Direct	Likely	Low
5	Air pollution limits	In the US, the Environmental Protection Agency (EPA) is drafting regulation that will subject GHG emissions to permitting requirements.	Increased operational cost	1-5 years	Direct	Likely	Low
6	Cap and trade schemes	Cap and trade schemes are planned under the Western Climate Initiative (WCI) and other regional schemes in North America. Rio Tinto has a large operating base in the affected states including California, Quebec, British Columbia, and Labrador (RTFT titanium feedstock, IOC iron concentrate, Boron industrial minerals, RTA aluminium smelters).	Increased operational cost	1-5 years	Direct	Very likely	Low-medium

5.1b

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; and (iii) the costs associated with these actions

Rio Tinto is unable (due to policy and carbon price uncertainty) and unwilling (due to commercial confidentiality) to provide estimates of costs of regulatory risk to the organisation. In comparison to developed economies it operates in sectors that are more emissions intense than economy averages. As such, unless policies incorporate well designed competitiveness at risk provisions the financial implications will be significant. Rio Tinto modelling at the time of the CPRS, based upon the

Government's publicly released carbon price modelling indicated that the cumulative cash cost for the first decade of the scheme would be greater than \$3 bn aud. Rio Tinto Australian based emissions are 44% of the global average. The key element to regulatory risk is careful and proper design. For this reason in each jurisdiction which is contemplating emissions regulation, Rio Tinto tries to be as engaged as possible in order to get the design right.

An Energy and Climate Strategy team is in place at Group level and in its product groups like RTA to develop a comprehensive strategy, which includes:

- Engaging directly with policymakers and advocating for economically and environmentally sound climate policy, particularly in Australia, the US, the EU, Canada and New Zealand and South Africa.
- Analysing the commercial and financial implications of regulatory risks
- Engaging in collaborative efforts, such as the US Climate Action Partnership and various industry bodies.
- Setting targets and developing programs for improved energy efficiency and emissions performance of the Group.
- Investing in research and development programs aimed at improving energy efficiency and emissions of our technology and operations.
- A global corporate programme of ensuring that emissions reporting meet increased regulatory requirements.
- Sharing information across the Group that enables analysis undertaken for one jurisdiction is available for use in others.

The cost of maintaining these programmes is several tens of millions of million dollars.

5.1c

Please describe your risks that are driven by change in physical climate parameters

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
1	Tropical cyclones	Interruptions to operations and damages of infrastructure, particularly to Australian coal, iron ore bauxite and uranium located in Queensland and Western Australia and Northern Territories.	Reduction/disruption in production capacity	>10 years	Direct	Likely	Low
2	Tropical cyclones	Interruptions to shipping of products to customers: Iron ore shipments from Western Australia are particularly vulnerable to disruptions by tropical cyclones.	Other: shipping disruption	Unknown	Direct	Likely	Low
3	Change in mean (average) temperature	Supply chain disruptions due to the thawing of winter ice roads: One of our operations in the sub-artic is dependent on the supply of materials during the winter using an ice road.	Reduction/disruption in production capacity	Current	Direct	Likely	Low
4	Change in precipitation	Potential negative effect on Rio Tinto's hydropower assets mainly located in North America. However,	Increased operational cost	Unknown	Direct	About as likely as not	Low

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	pattern	there is a high degree of uncertainty associated with rainfall, which will impact on future risks.					
5	Sea level rise	Potential to impact on coastal operations (e.g. Western Australian iron ore port facility), storm surges may affect coal stock piles in Queensland, road access along coasts, salt water intrusion into coastal freshwater supplies.	Reduction/disruption in production capacity	>10 years	Direct	Likely	Low

5.1d

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; and (iii) the costs associated with these actions

Rio Tinto considers the physical impacts of a changing climate as part of our risk analysis and business planning processes. The potential financial implications of physical risk are a function of business type and regional location, and will be different for each operation. The nature of the risks within the mining industry differ somewhat to those that are associated with long term urban, transport and energy infrastructure. Within the mining industry the interactions between brownfield expansions and defined operation lives, mean that there are greater opportunities to incorporate up to date lessons in climate impact assessments. The key is rigorous assessment of potential impacts during periods of upgrades and major investments.

Rio Tinto's corporate Energy & Climate Strategy (E&CS) department has developed guidance for businesses to apply when identifying and evaluating climate change risk, for building adaptive capacity over time so that strategic business objectives can continue to be met in a changing climate, and for considering climate change adaptation in new projects. To further support this work E&CS has facilitated the development of detailed climate modelling information for a number of operating sites, at an approximate cost of \$600,000.

In support of our climate change programs, in 2010 Rio Tinto asked the UK Hadley Centre to provide a concise report on the key developments in climate science and potential implications. This report has been used within Rio Tinto to inform senior executives on climate science updates, with the Hadley Centre also providing an executive briefing on the subject.

Changes in regional precipitation patterns: Rio Tinto Alcan has entered into a new \$500,000 research partnership with the Ouranos, a consortium working to better understand the impact of climate change on the Lac Saint-Jean basin in Quebec, Canada over the coming years. This joint effort will help provide a clearer picture of the future regional climate in the Lac Saint-Jean basin area, and the research projects will aim to better understand the impact of climate change on Rio Tinto Alcan water resource management operations, as well as improve hydrological forecasting in the short and long term.

Other examples of ways in which operating sites are considering the physical risk of climate change include:

- Inclusion of climate projections into water management programs, such as the long term assessment of sustainable water supplies and future flood risks;
- Inclusion of climate change in engineering design of new projects so that it is sufficiently robust for likely extreme events;

- Inclusion of climate change in disaster management planning;
- Inclusion of potential climate change impacts on ice road design and contingency planning.

5.1e

Please describe your risks that are driven by changes in other climate-related developments

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
1	Reputation	All geographical areas are affected as this risk affects both our operations and markets. However the risk is most acute in developed nations.	Other: Reduced access to land and reduced status of developer of choice	Unknown	Direct	Likely	Medium-high

5.1f

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; (iii) the costs associated with these actions

Whilst the effect of a poor reputation related to sustainable development could lead to difficulty in operational performance or accessing new mineral resources, it is not possible to quantify these effects in advance.

Sound governance and high standards of conduct are sources of competitive advantage for Rio Tinto. They contribute to long term business success by securing access to talent and capital, enhancing reputation and improving operational performance and supply chain management. Environmental performance, community relations, employee wellbeing and transparency are just as important to us as the technical aspects of mining and processing. Poor management of climate change risks will place this position and our business in jeopardy.

The Company has a programme of stakeholder engagement, which includes advocating for sound climate change policy as well as detailing the Group's Energy and Climate strategy.

We also advocate for the advancement of low emissions coal technology such as CCS. Rio Tinto has spent tens of millions of dollars on Hydrogen Energy California, which is a carbon capture and storage project. After three years of co-developing the project, Rio Tinto has decided to exit as the project does not meet our criteria for further investment. The main driver for the decision is the significant capital requirements for the project without sufficient offsetting revenue from secured power purchase agreements.

5.1g

Please explain why you do not consider your company to be exposed to risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

5.1h

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

5.1i

Please explain why you do not consider your company to be exposed to 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

Page: 6. Climate Change Opportunities

6.1

Have you identified any climate change opportunities (current or future) 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 physical climate parameters

Opportunities driven by changes in other climate-related developments

6.1a

Please describe your opportunities that are driven by changes in regulation

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact
1	International agreements	Regulation is likely to stimulate the use of some of our products: Regulation should lead to the increased use of nuclear power. This will provide a significant opportunity for Rio Tinto as one of the largest uranium producers. It is also expected to see increased demand for copper used in electrical conductors for the inevitable increased electrification. Titanium and aluminium will likely see continued demand for energy and fuel efficient manufacturing and transportation.	Increased demand for existing products/services	6-10 years	Direct	Likely	Medium
2	International agreements	The third phase of the EU emissions trading scheme from 2013 onwards will include a number of Rio Tinto Alcan operations currently exempt. Some of these assets are performing more energy and GHG emissions efficient than the industry average, which may provide a competitive advantage. As a cost of carbon is imposed on industry over time in other jurisdictions, Rio Tinto's large hydropower aluminium smelters and good performance in energy and GHG emissions efficiency due to latest aluminium smelting technology further enhances a competitive advantage.	Increased demand for existing products/services	6-10 years	Direct	Likely	Medium

6.1b

Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

It is not possible to disclose a quantification of the increased revenue from sales of relevant commodities due to uncertainties associated with future regulations. Also, Rio Tinto will not be able to share specific forecasts due to strict legal and commercial sensitivity associated with such statements.

To respond to these opportunities the company continues to invest in technology and products that will position it for a carbon constrained world. This includes reviewing the current commodity portfolio (e.g. investing in the expansion of uranium mining operations).

Rio Tinto has granted in 2010 final approval for the construction of the phase one of the energy and GHG emission efficient AP60 aluminium smelter project with an additional investment commitment of US\$758 million to increase energy and GHG emission efficient aluminium production.

Rio Tinto continues to invest in developing and maintaining its low emissions hydropower capacity. Investment in hydropower in Quebec exceeds \$200 million over several years.

6.1c

Please describe the opportunities that are driven by changes in physical climate parameters

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
1	Change in precipitation pattern	There may be areas where increased rainfall may be advantageous for hydropower generation. The relevant geographical areas are Asia, Africa and North America. However, there is a high degree of uncertainty associated with rainfall, which will impact on future risks.	Reduced operational costs	Unknown	Direct	About as likely as not	Medium

6.1d

Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

There are no significant financial implications associated with this opportunity. The change in the precipitation patterns may improve the management of hydropower generation, which will be significantly less complex with more abundant rainfall. These opportunities are being assessed using climatological models.

Further, Rio Tinto Alcan has entered into a new \$500,000 research partnership with the Ouranos, a consortium working to better understand the impact of climate change on the Lac Saint-Jean basin in Quebec, Canada over the coming years. This joint effort will help provide a clearer picture of the future regional climate in the Lac Saint-Jean basin area, and the research projects will aim to better understand the impact of climate change on Rio Tinto Alcan water resource management operations, as well as improve hydrological forecasting in the short and long term.

6.1e

Please describe the opportunities that are driven by changes in other climate-related developments

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
1	Other drivers	Development and sales of energy efficient aluminium smelting technology	Other: Increased deployment and sales of energy efficient technology	1-5 years	Direct	Very likely	Medium

6.1f

Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

There will be opportunities for increased levels of deployment and sales of energy efficient technology and IP. Rio Tinto does not publicly disclose any kind of forecasts of costs and forward looking statements. This is due to strict legal and commercial sensitivity associated with such statements. Rio Tinto Alcan is a leader in the development of energy efficient aluminium smelting technology. In an energy and carbon constrained world, operating and selling this technology will become a competitive advantage. Rio Tinto Alcan continues to invest the development of these technologies. The latest example is the construction of the latest series of energy efficient smelting technology in Quebec and British Columbia. These investments will exceed \$2 billion over several years.

6.1g

Please explain why you do not consider your company to be exposed to opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

6.1h

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

6.1i

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

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading [Investor]

Page: 7. Emissions Methodology

7.1

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

Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)
Tue 01 Jan 2008 - Wed 31 Dec 2008	30500000	20500000

7.2

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
Australia - National Greenhouse and Energy Reporting Act
ISO 14064-1
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
New Zealand - Guidance for Voluntary, Corporate Greenhouse Gas Reporting
The Climate Registry: General Reporting Protocol

7.2a

If you have selected "Other", please provide details below

7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)
CH4	IPCC Second Assessment Report (SAR - 100 year)
N2O	IPCC Second Assessment Report (SAR - 100 year)
SF6	IPCC Second Assessment Report (SAR - 100 year)
Other: HFC-23	IPCC Second Assessment Report (SAR - 100 year)
Other: HFC-32	IPCC Second Assessment Report (SAR - 100 year)
Other: HFC-43-10mee	IPCC Second Assessment Report (SAR - 100 year)
Other: HFC-125	IPCC Second Assessment Report (SAR - 100 year)
Other: HFC-134	IPCC Second Assessment Report (SAR - 100 year)
Other: HFE-143a	IPCC Second Assessment Report (SAR - 100 year)

7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data

Fuel/Material/Energy	Emission Factor	Unit	Reference
Bituminous coal	89.90	Other: kg CO2/GJ HHV	IPCC Guidelines for National Greenhouse Gas Inventories (2006)
Natural gas	50.50	Other: kg CO2/GJ HHV	IPCC Guidelines for National Greenhouse Gas Inventories (2006)
Petroleum coke	92.60	Other: kg CO2/GJ HHV	IPCC Guidelines for National Greenhouse Gas Inventories (2006)
Anthracite	93.40	Other: kg CO2/GJ HHV	IPCC Guidelines for National Greenhouse Gas Inventories (2006)

Fuel/Material/Energy	Emission Factor	Unit	Reference
Diesel/Gas oil	70.40	Other: kg CO2/GJ HHV	IPCC Guidelines for National Greenhouse Gas Inventories (2006)
Distillate fuel oil No 6	73.50	Other: kg CO2/GJ HHV	IPCC Guidelines for National Greenhouse Gas Inventories (2006)

Further Information

The list as per question 7.4 provides the main fuels used by Rio Tinto. The emission factors listed are based on those provided by the IPCC, and are used as a default in the absence of more specific data. Alternative sources include measured properties of actual fuels used, national greenhouse gas inventory methodology documents or specific jurisdictional regulatory reporting protocols. The attached document, 'GHE 203 E Definition of Fuels and Factors.pdf', details all fuels and default factors used by Rio Tinto.

Attachments

[https://www.cdproject.net/Sites/2011/29/15829/Investor CDP 2011/Shared Documents/Attachments/InvestorCDP2011/7.EmissionsMethodology/GHE 203 E Definition of Fuels and Factors 2010.pdf](https://www.cdproject.net/Sites/2011/29/15829/Investor%20CDP%202011/Shared%20Documents/Attachments/InvestorCDP2011/7.EmissionsMethodology/GHE%203%20E%20Definition%20of%20Fuels%20and%20Factors%202010.pdf)

Page: 8. Emissions Data - (1 Jan 2010 - 31 Dec 2010)

8.1

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

Operational control

8.2a

Please provide your gross global Scope 1 emissions figure in metric tonnes CO2e

27600000

8.2b

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e - Part 1 breakdown

Boundary	Gross global Scope 1 emissions (metric tonnes CO2e)	Comment
----------	---	---------

8.2c

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e - Part 1 Total

Gross global Scope 1 emissions (metric tonnes CO2e) - Total Part 1	Comment
--	---------

8.2d

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e - Part 2

Gross global Scope 1 emissions (metric tonnes CO2e) - Other operationally controlled entities, activities or facilities	Comment
---	---------

8.3a

Please provide your gross global Scope 2 emissions figure in metric tonnes CO2e

17000000

8.3b

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e - Part 1 breakdown

Boundary	Gross global Scope 2 emissions (metric tonnes CO2e)	Comment
----------	---	---------

8.3c

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e - Part 1 Total

Gross global Scope 2 emissions (metric tonnes CO2e) - Total Part 1	Comment
--	---------

8.3d

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e - Part 2

Gross global Scope 2 emissions (metric tonnes CO2e) - Other operationally controlled entities, activities or facilities	Comment
---	---------

8.4

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

8.4a

Please complete the table

Reporting Entity	Source	Scope	Explain why the source is excluded
------------------	--------	-------	------------------------------------

8.4

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

Yes

8.4a

Please complete the table

Source	Scope	Explain why the source is excluded
Operations with emissions of less than 3 kt CO2-e per annum	Scope 1 and 2	Below materiality threshold of 3 kt CO2-e annual emissions. Collectively, these operations are estimated to have emissions less than 2% of the Rio Tinto total.
Emissions associated with Rio Tinto Alcan cable manufacturing business	Scope 1 and 2	This business is not a core business of Rio Tinto and has been earmarked for divestment. Due to the planned divestment the emissions associated with this business are excluded from the inventory.

8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and Scope 2 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%	Metering/ Measurement Constraints Published Emissions Factors	Scope 1 emission uncertainty is strongly influenced by the uncertainty of methane emissions from open cut mining. Standard public factors are used unless better estimates are available due to pre-drainage activities. In general emission factors are the key source of uncertainty for most source types. Measurement of activities data also contributes to the overall uncertainty. The overall uncertainty of the data reflects the large number of individual sources that provide a significant sample set.
Scope 2	Less than or equal to 2%	Metering/ Measurement Constraints Published Emissions Factors	Scope 2 emission uncertainty is dominated by the use of publically available emission factors applicable to regional distribution networks. Publically available data is often based on data obtained for previous years. The measurement of electricity use is generally well measured given the large quantity of electricity purchased by many of our operations.

Scope	Uncertainty Range	Main sources of uncertainty	Please expand on the uncertainty in your data

8.6

Please indicate the verification/assurance status that applies to your Scope 1 emissions

Verification or assurance complete

8.6a

Please indicate the proportion of your Scope 1 emissions that are verified/assured

More than 90% but less than or equal to 100%

8.6b

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Relevant standard	Relevant statement attached
Limited assurance	ISAE 3000	See page 41 of Rio Tinto Annual Report 2010

8.7

Please indicate the verification/assurance status that applies to your Scope 2 emissions

Verification or assurance complete

8.7a

Please indicate the proportion of your Scope 2 emissions that are verified/assured

More than 90% but less than or equal to 100%

8.7b

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Relevant standard	Relevant statement attached
Limited assurance	ISAE 3000	See page 41 of Rio Tinto Annual Report 2010

8.8

Are carbon dioxide emissions from the combustion of biologically sequestered carbon (i.e. carbon dioxide emissions from burning biomass/biofuels) relevant to your company?

Yes

8.8a

Please provide the emissions in metric tonnes CO₂e

47000

Further Information

Please note that Rio Tinto defines total GHG emissions as direct emissions plus emissions from imports of electricity minus electricity and steam exports and net carbon credits purchased from, or sold to, recognised sources.

Thus, the sum of Scope 1 and Scope 2 emissions is not equal to total GHG emissions as stated in Rio Tinto's public statements.

Attachments

[https://www.cdproject.net/Sites/2011/29/15829/Investor CDP 2011/Shared Documents/Attachments/InvestorCDP2011/8.EmissionsData\(1Jan2010-31Dec2010\)/riotinto_2010_ara.pdf](https://www.cdproject.net/Sites/2011/29/15829/Investor%20CDP%202011/Shared%20Documents/Attachments/InvestorCDP2011/8.EmissionsData(1Jan2010-31Dec2010)/riotinto_2010_ara.pdf)

Page: 9. Scope 1 Emissions Breakdown - (1 Jan 2010 - 31 Dec 2010)

9.1

Do you have Scope 1 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?

Yes

9.1a

Please complete the table below

Country	Scope 1 metric tonnes CO2e
Australia	10250000
Canada	7210000
Iceland	300000
United Kingdom	3040000
United States of America	2520000
Other: Africa	2160000
France	1060000
Netherlands	230000
Other: Rest of Europe	20000
Other: Asia, Central America, South America	70000
New Zealand	690000

9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By business division

By GHG type

9.2a

Please break down your total gross global Scope 1 emissions by business division

Business Division	Scope 1 metric tonnes CO2e
Rio Tinto Alcan	15620000
Diamonds & Minerals	2990000
Energy	3320000
Iron Ore	3790000
Copper	1840000
Corporate Functions	10000

9.2b

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

Facility	Scope 1 metric tonnes CO2e
-----------------	-----------------------------------

9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 metric tonnes CO2e
CO2	23200000
CH4	2070000

GHG type	Scope 1 metric tonnes CO2e
N20	34000
HFCs	4000
PFCs	2210000
SF6	39000

9.2d

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

Activity	Scope 1 metric tonnes CO2e
----------	----------------------------

Page: 10. Scope 2 Emissions Breakdown - (1 Jan 2010 - 31 Dec 2010)

10.1

Do you have Scope 2 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?

Yes

10.1a

Please complete the table below

Country	Scope 2 metric tonnes CO2e
Australia	9250000
Canada	0
Iceland	0
United Kingdom	50000
United States of America	3710000
Other: Africa	3370000

Country	Scope 2 metric tonnes CO2e
Netherlands	20000
New Zealand	0
Other: Rest of Europe	10000
Other: Asia, Central America, South America	0
France	540000

10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By business division

10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 metric tonnes CO2e
Rio Tinto Alcan	12280000
Industrial Minerals & Diamonds	2660000
Copper	1260000
Rio Tinto Energy	710000
Rio Tinto Iron Ore	50000
Corporate	3600

10.2b

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

Facility	Scope 2 metric tonnes CO2e
----------	----------------------------

10.2c

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

Activity	Scope 2 metric tonnes CO2e
----------	----------------------------

Page: 11. Emissions Scope 2 Contractual

11.1

Do you consider that the grid average factors used to report Scope 2 emissions in Question 8.3 reflect the contractual arrangements you have with electricity suppliers?

Yes

11.1a

You may report a total contractual Scope 2 figure in response to this question. Please provide your total global contractual Scope 2 GHG emissions figure in metric tonnes CO2e

11.1b

Explain the basis of the alternative figure (see guidance)

11.2

Has your organization retired any certificates, e.g. Renewable Energy Certificates, associated with zero or low carbon electricity within the reporting year or has this been done on your behalf?

Yes

11.2a

Please provide details including the number and type of certificates

Type of certificate	Number of certificates	Comments
Renewable Energy Certificates	45552	

Page: 12. Energy

12.1

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

12.2

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

Energy type	MWh
Fuel	106400000
Electricity	35300000
Heat	0
Steam	500000
Cooling	0

12.3

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

Fuels	MWh
Anthracite	5190000
Jet kerosene	10000
Biodiesels	40000
Other: Petroleum Gas	16220000
Coke breeze	860000
Diesel/Gas oil	14430000
Lubricants	90000
Distillate fuel oil No 4	10000
Distillate fuel oil No 6	9900000
Liquefied petroleum gas (LPG)	80000
Bituminous coal	13220000
Natural gas	19100000
Motor gasoline	70000
Propane	40000
Other: Hydroelectric generation	26860000
Other: Electrodes	170000
Other: Biomass (solid)	110000
Other: Paraffin	20000
Other: Acetylene, Regenerative breaking, waste oil, biogasoline, wood or wood waste	10000

13.1

How do your absolute emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

13.1a

Please complete the table

Reason	Emissions value (percentage)	Direction of change	Comment
Other: Change in Group emissions intensity of production	67	Increase	In 2010 the closure or reduced production at older aluminium smelters that had low GHG emitting power sources offset some intensity reductions achieved during 2009. These closures and production decreases are one step towards our longer term strategy of modernisation. Please see Rio Tinto's emissions intensity Group KPI target as disclosed in Question 13.4 below.
Change in output	32	Increase	Overall, production increases including titanium dioxide feedstock, alumina, and iron ore production contributed to the increase in total emissions.

13.2

Please describe your gross 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	Explanation
0.76	metric tonnes CO2e	unit total revenue	25	Decrease	Metric denominator in thousand US\$ Gross sales revenue (including share of equity accounted units). For this intensity figure the combined Scope 1 and Scope 2 emissions are reported using the same boundary as for Rio Tinto's consolidated financial reporting in line with the Climate Change Reporting Framework (Part 1). Please note that emissions per unit total revenue is not a relevant metric for emissions performance due to the variability of commodity prices. The significant decrease from last year is mainly related to the recovery of commodity prices from GFC.

13.3

Please describe your gross 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	Explanation
649	metric tonnes CO2e	FTE Employee	6	Increase	For this intensity figure the combined Scope 1 and Scope 2 emissions are reported using the same boundary as for Rio Tinto's consolidated financial reporting in line with the Climate Change Reporting Framework (Part 1). Please note that emissions per full time equivalent employee is not a relevant metric for the energy intensive industry. Employees from Alcan Engineered Products and Packaging have been removed from the FTE employee count for 2009 and 2010. These businesses were earmarked for divestment since the acquisition of Alcan in 2008. Emissions associated with these businesses have also been excluded from Rio Tinto inventory.

13.4

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	Explanation
1.75	metric tonnes CO2e	Other: Ebitda	43	Decrease	Metric denominator in thousand US\$ Gross sales revenue (including share of equity accounted units). For this intensity figure the combined Scope 1 and Scope 2 emissions are reported using the same boundary as for Rio Tinto's consolidated financial reporting in line with the Climate Change Reporting Framework (Part 1). The significant decrease from last year is mainly related to the recovery of commodity prices from Global Financial Crisis.
96.3		Other: Emissions intensity indexed relative to 100 set for Group Intensity in 2008	3.8	Increase	In 2010 the closure or reduced production at older aluminium smelters that had low GHG emitting power sources offset some intensity reductions achieved during 2009. These closures and production decreases are one step towards our longer term strategy of modernisation.

14.1

Do you participate in any emission trading schemes?

Yes

14.1a

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	Fri 01 Jan 2010 - Fri 31 Dec 2010	3012639	0	2634166	Facilities we own and operate
Other: New Zealand ETS	Thu 01 Jul 2010 - Fri 31 Dec 2010	210421	0	312314	Facilities we own and operate

14.1b

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

The strategy is to fully comply with regulatory requirements, while optimising shareholder value. This is in turn supported by a series of emissions reduction activities aimed at lowering the Group's liability.

The Group does not operate emissions trading as a separate business activity. Trading activities are integrated into the Business Units' risk management programmes. Transactions are conducted in accordance with the Group's Treasury guidelines.

14.2

Has your company originated any project-based carbon credits or purchased any within the reporting period?

Yes

14.2a

Please complete the following table

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 retired	Purpose e.g. compliance
Credit Purchase	Other: Carbon credits purchased from secondary market - no information on project type available	Carbon credits purchased from secondary market - no information on project identification available	CDM	223000	223000	Yes	Compliance

Further Information

Please note that during the transition phase for the New Zealand ETS (July 2010 to December 2012) one NZU allowance will be required to cover every two metric tonnes of greenhouse gas emissions in a calendar year.

15.1

Please provide data on sources of Scope 3 emissions that are relevant to your organization

Sources of Scope 3 emissions	metric tonnes CO2e	Methodology	If you cannot provide a figure for emissions, please describe them
Use of sold products	360000000	Processing of iron ore: The emissions from processing iron ore is estimated by applying an emissions factor to Rio Tinto's annual production. For annual production see the Annual Report. Scope 3 emissions factor for steel is 1514 per tonne of product. This emissions factor is based on a life cycle analysis conducted by CSIRO Australia in 2002 for RTIO. Please note that the Scope 3 emissions should not be added up. This would lead to double accounting of emissions such as the use of coking coal in the iron ore/steel making industry.	
Use of sold products	122000000	Use of coal: The emissions from the use of coal is estimated from measured carbon content of Rio Tinto coal production, assuming all coal is combusted. For annual production see the Annual Report. The average carbon content is 66%. Please note that the Scope 3 emissions should not be added up. This would lead to double accounting of emissions such as the use of coking coal in the iron ore/steel making industry.	
Transportation and distribution	4700000	A typical transport distance is assumed for each class of shipment. The recorded sales are based on an internal database. The emissions factors for the different types of shipping ranges from 0.004 to 0.015 kg/t-km.	
Fuel- and energy-related activities (not included in Scope 1 or 2)	3500000	These scope 3 emissions include transmission losses from purchased electricity plus the emissions generated from the production and supply of major fuels used, including liquid fuels, natural gas and coals. Transmission losses, based on the following references, are applied to purchased electricity by Rio Tinto. Australia: NGERS & NGA 2008 UK and Europe: Digest of United Kingdom energy statistics 2009 ESKOM 2009 Annual Report Data; Table 1, p 224 Chubu Electric CSR Report 2008, p 38 India data is from http://cleantechindia.wordpress.com/2008/07/16/indias-electricity-transmission-and-distribution-losses/ South America data are from http://www.nationmaster.com/red/graph/ene_ele_pow_tra_and_dis_los_of_out-power-transmission-distribution-losses-output&ob=ws&b_desc=1 USA data are from US Energy Information Administration, 2007 (http://www.eia.doe.gov/cneaf/electricity/epa/epa_sprdshts.html). Scope 3 emission factors for the production of liquid fuels, natural gas, and coal is sourced from the Australian Government (Department of Climate Change) National Greenhouse Accounts Factors (Nov 2008). These factors were also applied to non-Australian businesses.	
Purchased goods and services	1800000	Major sources of scope 3 emissions are evaluated. This included the production of explosives and caustic soda. Emissions factors for scope 3 emissions were estimated by a study, commissioned in-house and conducted by Energetics. The emission factor for caustic soda production is 2.06 t CO2e /t and for explosives 1.5 t CO2e /t.	

Please indicate the verification/assurance status that applies to your Scope 3 emissions

Not verified or assured

15.2a

Please indicate the proportion of your Scope 3 emissions that are verified/assured

15.2b

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Relevant standard	Relevant statement attached
-----------------------------------	-------------------	-----------------------------

15.3

How do your absolute Scope 3 emissions for the reporting year compare to the previous year?

Increased

15.3a

Please complete the table

Reason	Emissions value (percentage)	Direction of Change	Comment
Change in output	8	Increase	Change in iron ore scope 3 emissions: Increased production of iron ore resulted in an increase of 8 per cent of the associated scope 3 emissions for iron ore.
Change in	1	Increase	Change in coal scope 3 emissions: Increased production of coal resulted in an increase of 1 per cent

Reason	Emissions value (percentage)	Direction of Change	Comment
output			of the associated scope 3 emissions for coal.
Change in output	4	Increase	Change in scope 3 emissions associated with transport: Increased production with associated transport of product was the main driver for a 4 per cent increased scope 3 emissions associated with transportation.
Change in output	6	Increase	Change in scope 3 emissions associated with fuel and energy related activities
Change in output	20	Increase	Change in scope 3 emissions associated with Purchased goods and services

Further Information

Note that in 2009 CDP response, the scope 3 emissions from the provision of fuels was included in the Purchased goods section. Following review of the WBCSD-WRI draft protocol for scope 3 emissions, it is clear that these should be included in the Energy-related activities (Category 3 in the standard). For the 2009 CDP response Energy related scope 3 emissions only included scope 3 emissions related to electricity supply, such as transmission losses.

Module: Sign Off

Page: Sign Off

Please enter the name of the individual that has signed off (approved) the response and their job title

Peter Cunningham

Global Head of Health, Safety, Environment & Communities