CDP 2013 Investor CDP 2013 Information Request

Iren SpA

Module: Introduction

Page: Introduction

0.1
Introduction
Please give a general description and introduction to your organization

IREN was set up on 1st July 2010 through the merger of Enìa and Iride and is at the top in the Italian multi-utilities sector occupying a leading position in its business areas, a balanced mix of regulated activities and free activities and a close integration between upstream and downstream activities. Due to its production assets, its past and present investments, its position in all business areas, in all phases in the energy chain, and its roots within the country, IREN is now one of the main Multi-utilities Groups on the Italian scene.
The IREN Group operates in the following sectors: electricity, gas, district heating, integrated water service and waste, and it also provides other public utility services (telecommunications, public lighting, traffic light services, facility management). A diversified business model, characterized by a mix of profits between free activities (35%) and regulated activities (65%), which guarantees solidity, development prospects and reduced risk levels. IREN is one of the main examples in Italy of multiutilities oriented towards the provision of services and creation of infrastructure for enriching and enhancing the country, in respect of the environment and the customers. The Group serves a multiregional area with over 7,000,000 inhabitants, with its about 4,500 employees, a Gross Operating Margin of 630 million euros in 2012, a portfolio of more than 1.4 million customers in the energy sector and over 2.4 million inhabitants served in the water service and waste management.

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
Sun 01 Jan 2012 - Mon 31 Dec 2012

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
Italy

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.

EUR(€)

0.6
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 sectors, companies in the oil and gas industry and companies in the information technology and telecommunications sectors 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 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@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.

Attachments

https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/InvestorCDP2013/Introduction/0_Board of directors.pdf

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

Climate change issues are strategic for Group businesses and therefore related topics are discussed at the highest levels of the organization within the Executive Committee (composed by the Chairman, the Deputy Chairman, the Chief Executive Officer and the General Manager) and the Board of Directors. These bodies control Environmental policies, update strategic plans are connected with sustainable development and climate change.

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	Incentivized performance indicator
Business unit managers	Monetary reward	Incentives of many Iren Group employees (from different departments/units and different level) are linked to projects with significant environmental and GHG emissions benefits (e.g. district heating, design and implementation of hydroelectric plants, reduction of the vehicles's number not used for industrial purposes, feasibility study on the exploration of the potential for market linked to mobility with electric cars, reduction of natural gas required for heating purification plant's sludge, renewal of the gas distribution network and leakages's reduction, energy optimization of building managed by the Group).
Energy managers	Monetary reward	Incentives of many Iren Group employees (from different departments/units and different level) are linked to projects with significant environmental and GHG emissions benefits (e.g. district heating).
Public affairs managers	Monetary reward	Incentives of many Iren Group employees (from different departments/units and different level) are linked to projects with significant environmental and GHG emissions benefits (e.g. district heating).
Other: Legal managers	Monetary reward	Incentives of many Iren Group employees (from different departments/units and different level) are linked to projects with significant environmental and GHG emissions benefits (e.g. district heating).
Other: Procurement managers	Monetary reward	Incentives of many Iren Group employees (from different departments/units and different level) are linked to projects with significant environmental and GHG emissions benefits (e.g. district heating).

Page: 2. 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

i. the scope of the process, i.e. the type of risks and opportunities considered by the process such as regulatory, customer behaviour changes, reputational and weather-related.
In the ERM model of Iren Group, the most relevant financial, commodity, operational and reputational risks are managed: in particular, the risks linked to natural catastrophes, pollution and droughts are among our top 20 risks.
ii. how risks/opportunities are assessed at a company level (e.g. reputational risk can impact on the full corporation).
An assessment process is active, in which owners are required to map and evaluate their inherent risks, controls and residual risks, in according to the company standards/policies. All the risks are merged and integrated for the whole Group.
iii. how risks/opportunities are assessed at an asset level (e.g. physical impacts can affect individual facilities). Asset level is defined as anything below company level such as individual sites and subsidiaries.
Risk assessment is made for the main Group facilities, for plant damage and business interruption, and it is updated once a year. The information is also used to aid Risk Management for customizing insurance program.
iv. the frequency of monitoring in terms of weeks/months/years.
Levels of risks and risk map are reviewed at least every three months for internal reporting, but most of these are monitored more often. Risk policies are revised at least yearly.
v. criteria for determining materiality/priorities.
Materiality/priorities of the risks mapped are determined on base of risk value (frequency*severity) in terms of enterprise value. Financial, operational and reputational impacts are taken in account within this evaluation.
vi. to whom are the results reported.
Board of Directors, Internal Auditing Committee, Executive Committee.

2.2
Is climate change integrated into your business strategy?

Yes

2.2a
Please describe the process and outcomes

i. How the business strategy has been influenced, i.e. the internal communication/reporting processes that achieve this.
Climate changes have been taken in account for the specific issues related to the Group production system. The main process involved in achieving the goal of considering climate changes in the company strategies in the Strategic Plan definition.
ii. What climate change aspects have influenced the strategy, e.g. how the strategy is linked to the risks and opportunities and emissions reduction targets (requested in subsequent sections of the information request).
Climate change directly influences energy business. The main climate changes aspects influencing Iren Group strategy are: average and extreme temperatures and the level of precipitations. Another aspect relevant for Iren business is emissions reduction targets, mainly linked to mandatory requirements issued by regulators. Iren Group strategy therefore considers not only risks linked to climate change but also the related opportunities (e.g. energy efficiency services, renewable energy, etc.)
iii. The most important components of the short term strategy that have been influenced by climate change (e.g. changes in operational practices, changing the way business is communicated, etc.). If climate change has only affected the long term strategy, this should be stated.
The most important component of short term strategy that has been influenced by climate change is thermoelectric plant operation, which is strictly related to energy needs from consumers and incentive and emission trading systems.
iv. The most important components of the long term strategy that have been influenced by the climate change (e.g. changing core business focus, development and incorporation of new technologies, etc.). In the less likely event that climate change has only affected the short term strategy, this should be stated.
The most important component of long term strategy that has been influenced by climate change is the structure of production mix of the Group (CHP, hydro with pumping plants,...).
v. How this is gaining you strategic advantage over your competitors.
Production mix of the Group can be better exploited than competitors (higher level of operation hours), because the main plants are low CO_2 emitting.
vi. What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy (e.g. investment, location, procurement, M&A, R&D). Both the business decision and the aspect of climate change that has influenced the business decision must be made clear in the answer. If there are none to report, this should be stated.
1) During the last years Iren invested in CHP plants and district heating network (Torino Nord) and WTE (Polo Ambientale Integrato in Parma), which allow GHG emissions reduction (compared to traditional heating system). Additionally, in the Environmental authorization for the WTE (Polo Ambientale Integrato in Parma) facility, the GHG emissions have been set at lower level than those required by current National and European regulations.
2) In the year 2012 the WTE plant of Reggio Emilia has been closed and the Group made investments in the hydroelectric sector in particular for the requalification and construction of some plants. In 2012 was also completed the reorganization of Edison Group that has allowed the Iren Group to acquire, in consideration of the participation of Edipower share capital's, the hydroelectric plant of Tusciano (annual production capacity of approximately 250 GWh).
3) In the year 2012 is also became operational the joint venture between the Iren Rinnovabili and CCPL Group. The goal of the two partners will be aimed to the joint development and enhancement of their assets photovoltaic also through the entry of financial partners.
4) The Group continued in 2012 research and development activities primarily aimed to develop academic research projects related to develop of district heating in the strategic areas (research contracts with Politecnico of Torino, ICOOR e RIE) and assess opportunities associated to the use of innovative technologies.
5) During 2012, Iren Acqua Gas participated in a research and development project named "PREPARED" aimed at defining global strategies finalized to reduce the

impact of climate change related to integrated water cycle. The knowledge, experience and technology assets of the partnership in different European countries, will be made for the common factor development of innovative solutions applied by management companies in the sample sites.
6) During 2012 the Group continued its research and development activities with regard to the rationalization of energy consumption, use of renewable energy resources and waste treatment. The Group has developed a project called Iren RE-BUILD, (project coordinated by IREN RINNOVABILI) for the development of a pilot initiative within the framework focused on upgrading the energy efficiency and performance of the assets construction (and subsequent development of a new line of business), which fits into the context regulatory outlined by Directive 2010/31/EU - Energy Performance of Buildings, research and development promoted by the Horizon 2020 program - Framework Programme for Research and Innovation, and the Strategic Energy Technology Plan (SET-Plan) for the promotion of technology low-carbon, that has allowed to obtain accreditation UNI 11339 (Expert Energy Management).
7) In order to improve energy efficiency, in 2012 the Group has begun the analysis to obtain the UNI CEI EN 50001 on Energy Management Systems and, as preparatory activities, has conducted a systematic study on energy consumption within the Group. To spread the culture of savings and energy efficiency, the Group has launched a project of corporate communication related to energy efficiency through the local intranet.

2.3
Do you engage in activities that could either directly or indirectly influence policy on climate change through any of the following? (tick all that apply)

Direct engagement
Trade associations
Funding research organizations

2.3a
On what issues have you been engaging directly?

Focus of legislation	Corporate Position	Details of engagement	Proposed solution
Energy efficiency	Support	Direct cooperation with the Municipal Government of Parma, Piacenza and Reggio Emilia to the definition of Municipal Energy Plans (Law Jan. 9, 1991, n. 10: Standard for the Implementation of the National Energy Plan in the field of rational use of energy, energy conservation and development of renewable sources of energy)	The Iren Group is committed to support the legislation without exceptions
Clean energy generation	Support	Direct cooperation with the Municipal Government of Parma, Piacenza and Reggio Emilia to the definition of Municipal Energy Plans (Law Jan. 9, 1991, n. 10: Standard for the Implementation of the National Energy Plan in the field of rational use of energy, energy conservation and development of renewable sources of energy)	The Iren Group is committed to support the legislation without exceptions

2.3bAre you on the Board of any trade associations or provide funding beyond membership?

Yes

2.3cPlease 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 postion?
FederUtility	Consistent	The Italian federation which brings together the local public utility companies of the water and energy sectors, and government bodies in national, European and global. The objectives of FederUtility, among others, are: promotion of measures designed to give effect to the principles and the national regulations and European Union for the environmental improvement, promotion of legislative initiatives related to the water and energy sector (electricity, gas, district heating), the representation of the associated organs in the European Parliament, the European Commission and other European bodies.	Participation in committees and working groups. The CEO of Iren is a member of the Presidential Committee, the Board of Directors and of the Permanent Commission of Electricity FederUtility (Federation of Energy and Water Companies).
Federambiente	Consistent	The Italian industry association for companies operating in the waste management sector. The objectives of Federambiente, among others, are: to promote the development of the system of general services in the environmental sector, promote environmental education through the recruitment of initiatives aimed at the improvement of the legal provisions on services of general economic in order to improve the legal system and to facilitate the technical and managerial development carrying out activities of study, training and consulting, represent the Associates in national and international trade associations.	Participation in committees and working groups.
Confservizi	Consistent	Italian industry association for the utility sector. Confservizi promotes commitment to the service of their proximity to the real needs of citizens, the appropriate use of natural resources, respecting the environment, even and especially in response to the reform of local public services. In addition to the primary function of representing its members at the national and international institutional partners, Confservizi realizes: • promotion and evaluation of laws and regulations for public utilities; • growth of corporate culture.	Participation in committees and working groups. The Ceo of Iren is the Coordinator of the energy sector as well as member of the Board of Confservizi Piemonte since January 2009.
Airu	Consistent	Italian Association for urban heating.	Participation in committees and working groups.
Anfida	Consistent	The Italian industry association that within the General Confederation of Italian Industry represents the category in the manner prescribed by the Articles Confederation, it belong to the private companies that have as their purpose the water supply activities, including water purification and sewerage management , whatever their legal form. The goals of the association are to promote solidarity and cooperation between the member companies, to organize studies, research, debates on topics of interest in the category, to protect it from an economic and trade union to represent their interests and acting as a general partner to institutions, organizations, public and private administrations. It is a significant presence and highly qualified business that is at the service of local government, to eliminate the root inefficiency and waste that represent a cost to the community and an obstacle on the way of development.	Participation in committees and working groups. The Iren Group is an associate of Anfida.
IWC	Consistent	Italian Water Convention is a non-profit association of businesses, organizations and professionals, in order to promote initiatives aimed at promoting the knowledge, technologies and innovations designed to reduce losses and to optimize the management of water systems.	Participation in committees and working groups.
International Gas Union	Consistent	IGU shall be the most influential, effective and independent non-profit organisation serving as the spokesperson for the gas industry worldwide. IGU acts in favour of gas as an integral part of a sustainable global energy future. The association promote all activities within the entire gas chain, which can add to the technical and economic progress of gas, encourage research and development towards new and better technologies for the gas community, promote the safe production, transmission, distribution and utilisation of gas; encourage and promote development of clean technology, encourage international trade in	Participation in committees and working groups.

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 postion?
		gas by supporting non-discriminatory policies and sound contracting principles and practises	
Eurelectric	Consistent	Euroelectric is the sector association which represents the common interests of the electricity industry at pan-European level, plus its affiliates and associates on several other continents. We currently have over 30 full members which represent the electricity industry in 32 European countries. Euroelectric's mission is to contribute to the development and competitiveness of the electricity industry, to provide effective representation for the industry in public affairs and to promote the role of a low-carbon electricity mix in the advancement of society.	Participation in committees and working groups.
UNIPEDE	Consistent	International Union of Producers and Distributors of electricity, an organization that brings together operators European electricity with the aim of developing the competitiveness of the associated.	In the field UNIPEDE the CEO of Iren participated in the work of the Study Committee "Hydraulic and other Renewable Energy".

2.3d
Do you publically disclose a list of all the research organizations that you fund?

Yes

2.3e
Do you fund any research organizations to produce public work on climate change?

Yes

2.3f
Please describe the work and how it aligns with your own strategy on climate change

The Iren Group supports and participates in several research groups in the field of environmental and climate change. The Group has relationships with Universities and Research Institutes, where in some cases it participates. Main topics covered by associations and working groups where Iren participates are: energy policies, water conservation and saving, renewable energy production, waste management, local policies linked to climate change (e.g. energy plans of Municipalities, local waste management policies, etc.), research and development programs, technology and process innovation. In particular:
1) Applied research projects, developed in collaboration with the Politecnico of Turin, Turin University, ICOOR Reggio Emilia, R.I.E. of Reggio Emilia, focusing in particular on innovative Thermal Smart Grid (TSG). The Thermal Smart Grid, or "intelligent" district heating networks, form the evolution of transport systems and city distribution of the heat produced through systems such as cogeneration.
2) Research and development activities primarily aimed to develop academic research projects related to develop of district heating in the strategic areas (research contracts with Politecnico of Turin, ICOOR e RIE of Reggio Emilia) and assess opportunities associated to the use of innovative technologies. The Committee on combined heat and power and on district heating, is composed by Managers of the sector, including Iren Managers, as well as by exponents from the two main universities of Turin (Politecnico of Torino and University of Torino). The Energy Committee aims to share information from the different members.
3) Enìa Research Center is focused on the development of renewable energy sources, and realizes the collaboration with the University of Modena and Reggio Emilia and works, in particular in research, training and design.
4) Collaboration with the Leap Consortium dealing with ongoing research on issues of energy and environment. The Consortium carries out activities in the sectors of the generation of thermal energy with high efficiency, biomass energy, waste and residues and technologies for the use of fossil fuels and CO2 capture. The members of the Consortium are the Politecnico di Milano (home of Piacenza), Foundation of Piacenza and Vigevano, the City and the Province of Piacenza, ASM Brescia, GROPPALLI Srl and Unical Ag S.p.A.
5) Participation in a research and development project named "PREPARED" aimed at defining global strategies finalized to reduce the impact of climate change related to integrated water cycle. The knowledge, experience and technology assets of the partnership in different European countries, will be made for the common factor development of innovative solutions applied by management companies in the sample sites.

2.3h
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 Executive Committee, Board of Directors and middle management involvement in direct and indirect engagement activities that influence policy, ensure the consistency with the company climate change strategy in general, and in particular with business decisions and ERM risk/opportunities evaluation having impact on climate change.

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

3.1b
Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions	Target year	Comment
1	Scope 1	91%	25%	metric tonnes CO2e per unit revenue	2010	0.000699	2012	Target refers to the district heating development of the city of Turin, Parma, Genoa. In 2010 the development of district heating has already done a reduction of -801332 tonn/year of CO2. In 2012, with the expansion of users, the development of district heating network and the construction of new CHP plants (eg. Torino Nord), the emission reduction risen up to -1008307 tonn/year. The reduction of CO2 emissions is calculated by comparing the emissions generated by the Iren Group (CHP plant connected of district heating network) and those relating to a reference system consists of conventional thermal power plants and boilers for traditional heating. In particular, to calculate the CO2 emission factor, we used the latest available data from Terna (updates as of 2011). We considered the gross electricity production of the Italian thermoelectric system (234,161 GWh) and the amount of power produced by each source. We then multiplied the energy production of each source with the related specific emission factors indicated in the CO2 National Allocation Plan 2008-2012. In this way

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions	Target year	Comment
								we determined the total amount of CO2 emitted for gross electrical production in the national system (115.300.852 t CO2). We then calculated the average emission factor for the national system (total CO2 emissions/total thermoelectric production = 0,492 tonnes CO2/MWh).
2	Scope 1	92%	10%	metric tonnes CO2e per megawatt hour (MWh)	2011	0.283335	2015	Target refers to the district heating development of the city of Turin, Parma, Genoa. In 2015, with the expansion of users, the development of district heating network and the increase of the energy efficiency of plants, the Group has the goal of reducing its emissions by 10% compared to 2011, considering an increase of energy production of 2% from 2011 to 2015.

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	Comment
1	Increase	15			The CO2 emissions related to district heating showed an increase related to the increase of energy production (+ 14% in 2012 compared to 2010) and not due to worsening the energy efficiency of systems managed by the Group. There was in fact an increase of emissions avoided by the plants connected to the district heating network of more than 25% in 2012 compared to 2010.
2	Decrease	8			The CO2 emissions related to district heating have showed a decrease in spite of the increase of energy production (+ 2% in 2015 compared to 2011). In the future it is expected to continue to avoid CO2 emissions thanks to the diffusion of district heating compared to traditional systems (conventional thermal power plants and boilers for traditional heating).

3.1d
Please provide details on your progress against this target made in the reporting year

ID	% complete (time)	% complete (emissions)	Comment
1	100%	100%	The target year is the same of the reporting year.
2	25%	16%	The figures reported are obtained from a calculation based on the intensity target.

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)

The CO2 emissions of Iren Group are significantly lower than those allowed on ETS scheme. The Iren's production is mainly based on hydroelectric and CHP plants that are connected to the energy grid and, with other services provided, mainly for the public sector, enable third parties to avoid GHG emissions.
• smart cities project: optimization of the accumulation systems, increase of the district heating system and innovations in terms of technologies and materials;
• street lighting: substitution of existing lights with those with lower power (-100W each);
• traffic lights management: substitution of existing traffic lights with LED ones;
• management of heating plants in buildings owned by Municipalities: accurate management of heating plants;
• global management of public buildings: implementation of the district heating system in the Court House of Turin.
• interconnectedness of Genoa's aqueducts: careful management, from energetic point of view, of water resources
• systems of water uptake in the aqueduct of Parma's city: energy optimization
• management of pumping systems driven by electric motors aqueduct in the province of Reggio Emilia: improvement of the management system
• "Acquapubblica": encourage the use of tap water through the installation of distribution points free of water coming from the water systems managed by Iren Acqua Gas
Additionally, since 2009 Iren developed the project "A scuola con il sole" ("At school with the sun"), installing solar panels for the school's energy consumptions. Iren is responsible for the development, installation and maintenance of the panels.
ii. An estimate of the amount of emission that are/were avoided over time, e.g. x metric tonnes CO2e per year with a 2007 baseline; x metric tonnes per year a period of 10 years (2003-2013);
In 2012 the Group obtained the CO2 emissions reduction of 1,008,307 tons CO2 through district heating and 532,770 tons CO2 through hydroelectric plants.
In addition, thanks to the installation of photovoltaic plants, in 2012 it has been possible to avoid the total CO2 emissions of 4,336 tons.
Thanks to the energy requalification, in 2012 it has been possible to avoid the emissions of 473 tons of CO2.
Additionally the following emissions were avoided/are planned to be avoided:
• smart cities project: when all the systems will be implemented, they should allow the decrease of around 680 tonnes CO2/year;
• street lighting: CO2 emissions reduction of 223 tonnes;
• traffic lights management: CO2 emissions reduction of 21 tonnes;
• management of thermal plants in buildings owned by Municipalities: CO2 emissions reduction of 402 tonnes;
• global management of public buildings: CO2 emissions reduction of 2122 tonnes;
• the interconnectedness of Genoa's aqueducts: CO2 emissions reduction of 5736 tonnes;
• energy optimization of systems of water uptake in the aqueduct of Parma's city: CO2 emissions reduction of 436 tonnes;
• improve the management of pumping systems driven by electric motors aqueduct in the province of Reggio Emilia: CO2 emissions reduction of 982 tonnes.
• "Acquapubblica" : since the project started the entry into operation of the distributors of "Acquapubblica" have saved: 25.6 million bottles (approximately 890 tons of plastic) and over 2,000 tons of CO2. In the year 2012 the CO2 emissions reduction have been about 700 tonnes.
Relating to the project "A scuola con il sole", in 2012 it permitted to avoid the production of about 200 tons of CO2.
iii. The methodology, assumptions, emission factors and global warming potentials (if you have expressed your carbon saving figure in CO2e) used for your estimations;
The emission factors used for the calculation of the C02 emission reductions are:
• smart cities project: 0,227 tonnes CO2/MWh;
• for district heating, hydroelectric plants and photovoltaic plants: 0,492 tonnes CO2/MWh.
In particular, to calculate the CO2 emission factor, we used the latest available data from Terna (updates as of 2011). We considered the gross electricity production of the Italian thermoelectric system (234,161 GWh) and the amount of power produced by each source. We then multiplied the energy production of each source with the related specific emission factors indicated in the CO2 National Allocation Plan 2008-2012. In this way we determined the total amount of CO2 emitted for gross electrical production in the national system (115.300.852 t CO2). We then calculated the average emission factor for the national system (total CO2

emissions/total thermoelectric production = 0,492 tonnes CO2/MWh).
• for all the other initiatives reported in ii point: 2626 kg CO2/Tep.
iv. Whether you are considering generating CERs or ERUs within the framework of CDM or JI (UNFCCC).
NO.

3.3
Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and implementation phases)

Yes

3.3a
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		
To be implemented*	1	680
Implementation commenced*	12	1554588
Implemented*	1	2122
Not to be implemented		

3.3b
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)	Annual monetary savings (unit currency - as specified in Q0.4)	Investment required (unit currency - as specified in Q0.4)	Payback period
Energy efficiency: Building services	Global management of public buildings: implementation of the district heating system in the Court House of Turin. This is a part of business activities and services managed by the Group.	2122	89802	234000	1-3 years

3.3c
What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	
Dedicated budget for energy efficiency	
Financial optimization calculations	
Internal finance mechanisms	

Further Information

3.3a - Data inserted in the table refers to the number of types of initiatives. Each initiative can include more than one project.

Page: 4. Communication

4.1 Have you published information about your company'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	Page/Section reference	Attach the document
In mainstream financial reports (complete)	94-102; 108	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments /Investor-4.1-C3-IdentifytAttachment/4_BC2012_definitivo.pdf
In voluntary communications (complete)	19-20; 45-52; 60-61; 134; 141-142;	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments /Investor-4.1-C3-IdentifytAttachment/4_BdS2012_definitivo.zip

Further Information

An english version will be soon available on http://www.gruppoiren.it/bilanci_sostenibilita_iren.asp
The assurance of Iren Group's Sustainability Report and of Financial Report at 31/12/2012 have been completed but the translation of the documents is not completed at the moment. We will provide you the English copies as soon as it is translated. Attached you can find the Italian version of Iren Group's Sustainability Report and of Financial Report at 31/12/12. Please note that the Page/Section Reference reported in the table above refers to Italian versions.

Module: Risks and Opportunities [Investor]

Page: 5. Climate Change Risks

5.1
Have you identified any climate change risks (current or future) 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
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	Italy is involved in Kyoto International Climate Agreement and, consequently, in the 2009/28 UE Directive. The actual targets in carbon emission reduction are 20%, subject to further increase up to	Increased operational cost	1-5 years	Direct	More likely than not	Medium

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
		25%. These targets should impact on gas-fired production units of Iren Group. Furthermore, the cost associated with ETS could vary.					
2	General environmental regulations, including planning	Piedmont mandatory laws on individual metering and controlling of buildings heating could lead to a significant reduction in heat consumption in the medium term (from 2014). For Iren Group, largely operating in district heating, the impact could be relevant.	Reduced demand for goods/services	1-5 years	Direct	Very likely	Medium-high
3	Uncertainty surrounding new regulation	Uncertainty about new regulations for plant operations.	Increased operational cost	1-5 years	Direct	Unlikely	Medium-high
4	Uncertainty surrounding new regulation	Uncertainty about new regulations for plant operations.	Reduction/disruption in production capacity	1-5 years	Direct	Unlikely	Medium-high
5	Product efficiency regulations and standards	Changes/reduction in incentives system for production with renewables and CHP.	Reduction in capital availability	1-5 years	Direct	Likely	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

1 - International agreements.
i. In the short term the financial impact should not be material, because all gas-fired units are operating in high efficiency combined heat and power production and therefore changes should not affect those units before conventional units of national production mix.
ii. Combined plants high efficiency heat, power plants and district heating.
iii. There are no extra costs associated.
2. General environmental regulations, including planning.
i. Reduction in revenues related to heating.
ii. Evaluation of acceptable increasing in heated volumetry in order to compensate shorter consumption.
iii. Investments in district heating networks.
3. Uncertainty surrounding new regulation.
i. The risk could impact Iren Group with increased needs for investments in new environmental technologies.
ii. Plant projects always compliant with new environmental regulation.
iii. Costs related to environmental investments.
4. Uncertainty surrounding new regulation.
i. Reduction in revenues in case of business interruption due to plants non compliant.
ii. Plant projects always compliant with new environmental regulation.
iii. Costs related to environmental investments.
5. Product efficiency regulations and standards.
i. Reduction in planned revenues from Green and White Certificates.
ii. Promotion of incentives for green energy production.
iii. Around 4 FTE in charge of managing interactions with regulators.

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
6	Change in mean (average) temperature	Changes in average temperature mainly affect the Group in heat production for district heating, i.e. higher mean temperatures require less heat and vice-versa.	Reduced demand for goods/services	Current	Direct	Likely	Medium
7	Change in temperature extremes	Fast changes in energy demand for air conditioning due to summer high temperatures may lead to overloads on distribution network: this event may require emergency management to assure safety operations on the national electrical system (PESSE).	Inability to do business	Current	Direct	Unlikely	Low-medium
8	Change in precipitation extremes and droughts	Changes in yearly level of precipitation for the Group may determine: a) lower hydroelectric production; b) droughts in water distribution system.	Reduction/disruption in production capacity	Current	Direct	Likely	Medium-high

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

6. Change in mean (average) temperature.
(i) Less revenues from district heating and lower margins from CHP.
(ii) None: the risk is accepted.
(iii) None
7. Change in temperature extremes.
(i) Low impacts due to business interruptions needed to preserve the integrity of assets.
(ii) Compliance with regulatory procedures.
(iii) Investments for compliance.
8. Change in precipitation extremes and droughts.
(i) Lower revenues from hydroelectric production.
(ii) Constant managing of reservoirs levels. Pumping hydroelectric plants.
(iii) IT costs. Investment and O&M costs related to pumping system.

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
9	Changing consumer behaviour	Italian consumers are taking more care on climate changes in their consumption behaviours: consequently, energy wastes are reducing and green energy demand	Reduced demand for goods/services	1-5 years	Direct	Likely	Medium

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
		is increasing.					
10	Uncertainty in social drivers	For certain categories of assets, e.g. WTE plants, "nimby" syndrome may lead to hostility from people living in the nearbies.	Inability to do business	Current	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

9. Changing consumer behaviour.
(i) Reduced revenues from power.
(ii) Investments in renewal (hydroelectric) plants.
(iii) Investments costs.
10. Uncertainty in social drivers.
(i) Reduced investments and revenues
(ii) Communication initiatives.
(iii) Advertising costs.

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	International/EU agreements pursuit energy efficient solutions coherent with green houses gas reduction goals. In this context, Iren Group may have development opportunities with new technologies and exploit the actual production mix.	Investment opportunities	1-5 years	Direct	Very likely	Medium-high
2	Air pollution limits	Production plants of Iren Group are all based on low (or zero) CO2 technologies; air pollution limits can improve the opportunities of exploiting those assets.	Increased demand for existing products/services	1-5 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 and (iii) the costs associated with these actions

1. International agreements.
(i) EU regulations can accelerate new projects in the field of renewable or low CO2 technologies and waste to energy, where the Group is already active.
(ii) Diversified presence in power production, environmental services, regasification.
(iii) Investment/R&D costs.
2. Air pollution limits.
(i) Improving in exploiting power production capacity due to the increased demand of low CO2 technologies may lead to increasing revenues and margins.
(ii) Low (or zero) CO2 assets.
(iii) Investment costs.

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
3	Change in temperature extremes	Changes in temperature extremes during summer periods may increase power consumption for air conditioning needs, with higher energy prices.	Increased demand for existing products/services	Current	Direct	Likely	Low-medium
4	Change in mean (average) precipitation	Higher mean precipitation levels may determine a better exploiting of hydroelectric plants capacity.	Increased production capacity	Unknown	Direct	More likely than not	Medium
5	Change in temperature extremes	Lower temperatures in winter periods may increase the demand of heat for district heating and the operation of CHP plants may be improved.	Increased demand for existing products/services	Unknown	Direct	More likely than not	Medium

6.1d
Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity and (iii) the costs associated with these actions

3. Changes in temperature extremes.
(i) Higher prices and revenues.
(ii) Availability of plant production capacity during summer periods.
(iii) None.
4. Change in mean (average) precipitation.
(i) Higher revenues and margins from hydroelectric production.
(ii) Investments in hydroelectric business.
(iii) Investment costs.
5. Changes in temperature extremes.
(i) Higher revenues.
(ii) Investments in CHP and district heating.
(iii) Investment costs.

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
6	Changing consumer behaviour	Changes in consumer behaviour can determine these opportunities: a) shifting of power consumption towards less expensive hours in the day reduces volatility of energy prices; b) waste separate collection is increasing and this trend may determine lower costs and higher efficiency in waste management.	Reduced operational costs	Current	Direct	Very likely	Medium-high

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

6. Changing consumer behaviour.
(i) Power and environmental lines of business may become more efficient.
(ii) Specific advertising campaigns; specific tariff structures.
(iii) Advertising costs.

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)
Sat 01 Jan 2011 - Sat 31 Dec 2011	2349237	106948

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

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 Fourth Assessment Report (AR4 - 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
Natural gas	1.9	Other: Metric tonnes CO2 per 1000 Stdm3	Factors used for the CO2 emissions inventory in the national UNFCCC (average of values of the years 2007-2009). These data can be used for the calculation of emissions from 1 January 2011 to 31 December 2012.
Diesel/Gas oil	3.1	metric tonnes CO2 per metric tonne	Factors used for the CO2 emissions inventory in the national UNFCCC (average of values of the years 2007-2009). These data can be used for the calculation of emissions from 1 January 2011 to 31 December 2012.
Crude oil	3.1	metric tonnes CO2 per metric tonne	Factors used for the CO2 emissions inventory in the national UNFCCC (average of values of the years 2007-2009). These data can be used for the calculation of emissions from 1 January 2011 to 31 December 2012.
Electricity	0.5	metric tonnes CO2 per MWh	To calculate the CO2 emission factor, we used the latest available data from Terna (updated as of 2011). We considered the gross electricity production of the Italian thermoelectric system (234,161 GWh) and the amount of power produced by each source. We then multiplied the energy production of each source with the related specific emission factors indicated in the CO2 National Allocation Plan 2008-2012. In this way we determined the total amount of CO2 emitted for gross electrical production in the national system (115.300.852 t CO2). We then calculated the average emission factor for the national system (total CO2 emissions/total thermoelectric production = 0,492 tonnes CO2/MWh).
Biogas	1.2	Other: Ton CO2 per MWh	The emission factor used refers to landfills. The calculation is based on internal plants data.
Other: Waste to Energy Plants	0.9	metric tonnes CO2 per MWh	The emission factor used refers to waste to energy plants. The calculation is based on internal plants data.

Further Information

For the calculation of CO2 emissions from transportation we used emission factors taking into account the vehicles category (Euro 1, 2, etc.) and fuel used. The factors are those provided by Arpa Regione Lombardia – the regional environmental agency (please, see the attachment)

Attachments

https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/InvestorCDP2013/7.EmissionsMethodology/7_Emission Factors_Trasport_ARPA Lombardia.pdf

Page: 8. Emissions Data - (1 Jan 2012 - 31 Dec 2012)

8.1
Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

8.2
Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

2429440

8.3
Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

111753

8.4
Are there are any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions which are not included in your disclosure?

No

8.5
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 1 emissions: Uncertainty range	Scope 1 emissions: Main sources of uncertainty	Scope 1 emissions: Please expand on the uncertainty in your data	Scope 2 emissions: Uncertainty range	Scope 2 emissions: Main sources of uncertainty	Scope 2 emissions: Please expand on the uncertainty in your data
More than 5% but less than or equal to 10%	Data Gaps Assumptions	Some kilometers traveled by Company cars are estimated. Additionally, considering the large number of sites and facilities managed by the Group, some not material energy consumptions are not included. Please consider that assumptions and data gaps refer to not material consumptions compared to total Scope 1 emissions.	More than 5% but less than or equal to 10%	Data Gaps	Considering the large number of sites and facilities managed by the Group, some not material energy consumptions are not included.

8.6
Please indicate the verification/assurance status that applies to your Scope 1 emissions

Third party 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	Attach the document
Limited assurance	ISAE3000	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_KPMG_Letter_BdS2012_ita.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_BIT_130320_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Mirafiori_130320_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Moncalieri_130320_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Pappagnocca_130326_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Parma_S.Margherita_130320_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Via Sardegna_130326_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Parma_Via_Lazio_130320_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_PIACENZA_Via_Diete_di_Roncaglia_130320_Attesta….pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Politecnico_130320_Attestato_finale.pdf

Type of verification or assurance	Relevant standard	Attach the document
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Polo Energetico_130326_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Rete1_130326_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Sampierdarena_130320_Attestato_finale.pdf
Reasonable assurance	European Union emissions trading system (EU ETS)	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/8_IrenEnergia_Torino_Nord_130320_Attestato_finale.pdf

8.7
Please indicate the verification/assurance status that applies to your Scope 2 emissions

Third party 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	Attach the document
Limited assurance	ISAE3000	https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-8.7b-C3-RelevantStatement/8_KPMG_Letter_BdS2012_ita.pdf

8.8
Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

Yes

8.8a
Please provide the emissions in metric tonnes CO2

20814

Further Information

8.6) An english version will be soon available on http://www.gruppoiren.it/bilanci_sostenibilita_iren.asp
The assurance of Iren Group's Sustainability Report at 31/12/2012 has been completed but the translation of the document is not completed at the moment. We will provide you the English copy as soon as it is translated. Attached you can find the Italian version of Iren Group's Sustainability Report with the Limited Assurance Report on Sustainability Report.at 31/12/12 .
8.7) An english version will be soon available on http://www.gruppoiren.it/bilanci_sostenibilita_iren.asp
The assurance of Iren Group's Sustainability Report at 31/12/2012 has been completed but the translation of the document is not completed at the moment. We will provide you the English copy as soon as it is translated. Attached you can find the Italian version of Iren Group's Sustainability Report with the Limited Assurance Report on Sustainability Report.at 31/12/12 .
8.8a) Data refers to CO2 emissions from biogas burned in landfills.

Attachments

https://www.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/InvestorCDP2013/8.EmissionsData(1Jan2012-31Dec2012)/8_BdS2012_definitivo.zip

Page: 9. Scope 1 Emissions Breakdown - (1 Jan 2012 - 31 Dec 2012)

9.1
Do you have Scope 1 emissions sources in more than one country?

No

9.2
Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By activity

9.2d
Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Combined heat and power	2281317
Waste to Energy Plants	110990
Landfills	20814
Offices activities	6068
Transports (Company cars)	10251

Page: 10. Scope 2 Emissions Breakdown - (1 Jan 2012 - 31 Dec 2012)

10.1
Do you have Scope 2 emissions sources in more than one country?

No

10.2
Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By activity

10.2c
Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions (metric tonnes CO2e)
Processes activities	103686
Offices activities	8067

Page: 11. Energy

11.1
What percentage of your total operational spend in the reporting year was on energy?

More than 50% but less than or equal to 55%

11.2
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	11676886
Electricity	226956
Heat	
Steam	
Cooling	

11.3
Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Natural gas	11423635
Diesel/Gas oil	61121
Crude oil	346
Motor gasoline	3748
Liquefied petroleum gas (LPG)	355
Biogas	186507
Methane	1174

11.4
Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor

Basis for applying a low carbon emission factor	MWh associated with low carbon electricity, heat, steam or cooling	Comments
Grid connected low carbon electricity generation owned by company, instruments created and retired by company	506	Green Certificates generated in 2012 by hydroelectric power plants.

Page: 12. Emissions Performance

12.1
How do your absolute emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

12.1a
Please complete the table

Reason	Emissions value (percentage)	Direction of change	Comment
Emissions reduction activities			
Divestment			
Acquisitions			
Mergers			
Change in output			
Change in methodology			
Change in boundary	3	Increase	The increase of emissions is mainly due to an Increase of energy production from CHP plants and boilers (+ 8% in 2012 compared to 2011), the full operation of the TO Nord plant in the year 2012 (in 2011, the plant has been operating for only 3 months) and the consideration, in 2012, of consumptions not tracked in 2011 (eg heating and electricity consumption in some of Iren buildings and electricity consumption in some of Iren plants).
Change in physical operating conditions			
Unidentified			
Other			

12.2
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	Reason for change
0.00059	metric tonnes CO2e	unit total revenue	16	Decrease	The revenues have been increased more than CO2 emissions compared to 2011

12.3
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	Reason for change
568	metric tonnes CO2e	FTE employee	5	Increase	The number of employees is decreased while the CO2 emissions are increased compared to 2011

12.4
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
0.270	metric tonnes CO2e	megawatt hour (MWh)	4	Decrease	The CO2 emissions have been slightly increased less than energy production compare to 2011. The intensity figure is calculated considering CO2 emissions due to energy production generated in all Iren Group's production plants (part of scope 1) compared with all electric and heating production by the Group (MWh).

Page: 13. Emissions Trading

13.1
Do you participate in any emissions trading schemes?

Yes

13.1a
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	Sun 01 Jan 2012 - Mon 31 Dec 2012	2353161	0	2281317	Facilities we own and operate

13.1b
What is your strategy for complying with the schemes in which you participate or anticipate participating?

Iren Group's approach on complying with the schemes, is part of the wider approach to sustainability, that is to continue respecting the allowances allocated based on ETS scheme, also considering the operativeness of new energy plants (Torino Nord).

13.2
Has your company originated any project-based carbon credits or purchased any within the reporting period?

Yes

13.2a
Please complete the 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	HFCs	RU1000202	JI (Joint Implementation)	200000	200000	Yes	Compliance
Credit Purchase	Energy efficiency: industry	UA1000223	JI (Joint Implementation)	100000	100000	Yes	Compliance
Credit Purchase	Methane avoidance	UA1000323	JI (Joint Implementation)	84859	84859	Yes	Compliance
Credit Purchase	Methane avoidance	UA1000330	JI (Joint Implementation)	10000	10000	Yes	Compliance
Credit Purchase	Landfill gas	UA1000360	JI (Joint Implementation)	200000	200000	Yes	Compliance
Credit Purchase	Fossil fuel switch	UA1000368	JI (Joint Implementation)	100000	100000	Yes	Compliance
Credit Purchase	Landfill gas	UA1000379	JI (Joint Implementation)	100000	100000	Yes	Compliance
Credit Purchase	Energy efficiency: industry	UA1000414	JI (Joint Implementation)	100000	100000	Yes	Compliance
Credit Purchase	Landfill gas	UA1000450	JI (Joint Implementation)	200000	200000	Yes	Compliance
Credit Purchase	Energy efficiency: industry	UA2000037	JI (Joint Implementation)	100000	100000	Yes	Compliance

Page: 14. Scope 3 Emissions

14.1
Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3	Evaluation	metric	Methodology	Percentage of	Explanation

emissions	status	tonnes CO2e		emissions calculated using primary data	
Purchased goods and services					
Capital goods					
Fuel-and-energy-related activities (not included in Scope 1 or 2)					
Upstream transportation and distribution					
Waste generated in operations					
Business travel					
Employee commuting					
Upstream leased assets					
Investments					
Downstream transportation and distribution					
Processing of sold products					
Use of sold products					
End of life treatment of sold products					
Downstream leased assets					
Franchises					
Other (upstream)					
Other (downstream)		368	The Greenhouse Gas Protocol: a Corporate Accounting and Reporting Standard (Revised Edition). Data refers to emissions generated by the transportation of waste generated by the Group and reused/recycled.		

14.2
Please indicate the verification/assurance status that applies to your Scope 3 emissions

Third party verification or assurance complete

14.2a
Please indicate the proportion of your Scope 3 emissions that are verified/assured

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

14.2b
Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Relevant standard	Attach the document
Limited assurance	ISAE3000	https://webadmin.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/Investor-14.2b-C3-RelevantStatementAttached/14_KPMG_Letter_BdS2012_ita.pdf

14.3
Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

14.3a
Please complete the table

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Other (downstream)	Divestment	13	Decrease	During 2012 the WTE plant of Reggio Emilia and Mirafiori Nord plant have been closed. In addition, in 2012, the Group has made improvements in some plants (eg. activation of production plant of demineralized water osmosis that does not generate waste, but it produces an effluent that is sent into the sewer, etc.) that have generated a reduction in waste products and disposed, compared to the year 2011.

14.4
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 customers
Yes, other partners in the value chain

14.4a
Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

The types of Iren Group's commercial offers are in many cases particularly committed to the environment. In 2012, the Group launched the offer of certified 100% renewable energy both for residential customers and for companies. In addition, in 2012 the Iren Group has established a new offering to its customers called "1 light year plus green" that allows to keep the energy price fixed and unchanged for 1 year of supply. It refer only to the part relating to the cost of purchase / production of energy (raw material). The electricity relative to the volumes taken by the Client of the offer, will be exclusively produced from renewable sources (eg. hydro, solar, wind, etc.). To do this, Iren Mercato agrees to compensate the volumes collected annually by the Customer with special certificates (Certificates of origin / Co-fer).
The Iren Group has undertaken, in collaboration with the municipalities Shareholders, some initiatives to raise awareness and involvement that have benefits on climate change. In particular, we note:
- "Acquapubblica" is a project promoted by Iren Group to encourage the use of tap water through the installation of free distribution points of water coming from the water systems managed by Iren Acqua Gas. To date, 49 distributors were installed in the three provinces of Piacenza, Parma and Reggio Emilia. Every day they are used by More than 10,000 families by providing free More than 100,000 gallons of water. Significant environmental benefits as the spread of the distributors of

"Acquapubblica" help to reduce the production of plastic waste and of CO2 emission;
- The project "A Scuola con il Sole" was born from the will to combine the industrial process of electrical production with the spread of awareness of the rational use of natural resources and energy to protect the environment, hence addressing the project to primary schools to propagate sustainable practices in the area, in particular with the direct involvement of the younger generation.
The educational program (19.500 people involved) includes:
• meetings (240 meeting) of representatives of Iren Rinnovabili with the different classes of the School to illustrate the different forms of energy, energies from renewable sources and operation of the photovoltaic system installed at the School (23 photovoltaic systems have been installed);
• panels on display in the school complex which explain the operating system installed on the roof, thanks to the presence of counters that show energy production and reduction of CO2 emissions in real time;
• the distribution of a brochure (6.500 brochures for students and 7.000 leaflets for families) to all students with information on solar energy, simple exercises to be done to better understand the operation, as well as tips for saving energy at home and at school;
• the distribution of informations that were also at domestic level, related to the attention that can be put into practice for energy saving at home.
The project was carried out in 18 Municipalities of the province of Parma, Piacenza and Reggio Emilia.
The project has been politically and socially accepted thanks to its consistency with the objectives of the area in terms of energy savings. In addition, the cost savings that the project created for schools was an important lever of social sharing in a time of economic and financial difficulties for families and for public administrations Municipalities).
- In Genoa, Genova Reti Gas (a Iren Group's entity) has partnered with the City in the presentation of a project for a district heating network and was ranked in first place in the European competition "Smart Cities and Communities 2012" of the General Directorate for Energy of the European Commission.
- The Turin district heating system, managed by Iren Group, has been certified Ecoheat4Cities, a project supported by the Intelligent Energy Europe (IEE) program that promotes awareness of district heating systems through a voluntary system of "green labeling". The certificate Ecoheat4cities provides a tool for measuring the sustainability and performance of district heating systems based on local knowledge and resources available and verified. The Turin district heating system has reached the highest level of efficiency on Efficiency parameter of primary resources (7 of 7 petals) and the second level on Efficiency CO2 emissions (6 petals on 7). The main purpose of the project is Ecoheat4cities to support the implementation of the Renewable Energy Directive (2009/89/EC). The expected results of the project are to design and establish a pattern of the European Green labeling on a voluntary basis to serve as a towing to make renewable energy and energy efficiency in district heating, the good opportunities for choice and to accelerate the implementation of the Energy Renewable Directive.
In addition, the Iren Group, to ensure the reliability environmental of its suppliers, it requires in the qualification phase, where necessary, the possession of the certification of the Environmental Management System according to the UNI EN ISO 14001 and / or EMAS Regulation and the application of the Economically Viable Best Available Technology criterion with lower environmental impact. The Iren Group evaluates the performance of its suppliers through a vendor rating system that is also based on environmental criteria.

Further Information

14.2) An english version will be soon available on http://www.gruppoiren.it/bilanci_sostenibilita_iren.asp
The assurance of Iren Group's Sustainability Report at 31/12/2012 has been completed but the translation of the document is not completed at the moment. We will provide you the English copy as soon as it is translated. Attached you can find the Italian version of Iren Group's Sustainability Report with the Limited Assurance Report on Sustainability Report.at 31/12/12 .

Attachments

https://webadmin.cdproject.net/sites/2013/73/31273/Investor CDP 2013/Shared Documents/Attachments/InvestorCDP2013/14.Scope3Emissions/14_BdS2012_definitivo.zip

Module: Electric utilities

Page: Investor-EU0ReferenceDates

EU0.1
Reference dates
EU0.1: Please enter the dates for the periods for which you will be providing data. The years given as column headings in subsequent tables correspond to the "year ending" dates selected below. It is requested that you report emissions for: (i) the current reporting year; (ii) one other year of historical data (i.e. before the current reporting year); and, (iii) one year of forecasted data (beyond 2016 if possible).

Year ending	Date range
2011	Sat 01 Jan 2011 - Sat 31 Dec 2011
2012	Sun 01 Jan 2012 - Mon 31 Dec 2012
2015	Thu 01 Jan 2015 - Sat 31 Jan 2015

Page: Investor-EU1GlobalTotalsByYear

EU1.1
In each column, please give a total figure for all the countries for which you will be providing data for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emission intensity (metric tonnes CO2e/MWh)
2011	2569	8194	2247250	0.3
2012	2528	8708	2320522	0.3
2015	4423	10393	2704645	0.2

Further Information

Figures reported refer both to electricity and heating.

Page: Investor-EU2IndividualCountryProfiles - Italy

EU2.1
Please select the energy sources/fuels that you use to generate electricity in this country

Hydro
Other renewables
Other

EU2.1g
Hydro

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)
2011	503	983
2012	508	1082
2015	603	1295

EU2.1h
Other renewables

Please complete the following table for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)
2011	7	4
2012	7	9
2015	11	12

EU2.1i
Other

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2011	2059	7207	2247250	0.311
2012	2013	7617	2320522	0.304
2015	3809	9085	2704645	0.297

EU2.1j
Solid biomass

Please complete for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2011	0	0		
2012	0	0		
2015	0	0		

EU2.1k
Total thermal including solid biomass

Please complete for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2011	1390	570	85207	0.149
2012	1393	699	92598	0.132
2015	1414	721	166961	0.231

EU2.1l
Total figures for this country
Please enter total figures for this country for the "year ending" periods that you selected in answer to EU0.1

Year ending	Nameplate capacity (MW)	Production (GWh)	Absolute emissions (metric tonnes in CO2e)	Emissions intensity (metric tonnes CO2e/MWh)
2011	3959	8764	2332457	0.266
2012	3921	9407	2413121	0.257
2015	5836	11114	2871606	0.258

Further Information

EU2.1 H Other renewables
Data refers to the Group photovoltaic plants.
EU2.1 I Other (combined heat and power + waste + biogas)
The figures relate to combined heat and power plants, waste to energy plants and biogas from landfill. For combined heat and power plants figures relate to both electricity and heating.
EU2.1K Total thermal including solid biomass
Figures refer only to boilers. Data referring to thermal production of combined heat and power plants has been included in the previous table "Other".

Page: Investor-EU3RenewableElectricitySourcing

EU3.1
In certain countries, e.g. Italy, the UK, the USA, electricity suppliers are required by regulation to incorporate a certain amount of renewable electricity in their energy mix. Is your company subject to such regulatory requirements?

Yes

EU3.1a
Please provide the scheme name, the regulatory obligation in terms of the percentage of renewable electricity sourced (both current and future obligations) and give your position in relation to meeting the required percentages

Scheme name	Current % obligation	Future % obligation	Date of future obligation	Position in relation to meeting obligations
Italy - green certificates	7.55%	5.03%	2013	The Group is committed to the respect of obligations, thanks to its production from renewable source.

Page: Investor-EU4RenewableElectricityDevelop

EU4.1

Please give the contribution of renewable electricity to your company's EBITDA (Earnings Before Interest, Tax, Depreciation and Amortization) in the current reporting year in either monetary terms or as a percentage

Please give:	Monetary figure	%	Comment
Renewable electricity's contribution to EBITDA	118	18.7%	The figures include data related to hydroelectric energy, other renewable energy and waste to energy..The figure is in M Euros

EU4.2
Please give the projected contribution of renewable electricity to your company's EBITDA at a given point in the future in either monetary terms or as a percentage

Please give:	Monetary figure	%	Year ending	Comment
Renewable electricity's contribution to EBITDA	103	15.4%	2015	The figures include data related to hydroelectric energy and other renewable energy. The figure is in M Euros.

EU4.3
Please give capital expenditure (capex) planned for the development of renewable electricity capacity in monetary terms and as a percentage of total capex planned for power generation in the current capex plan

Please give:	Monetary figure	%	End year of capex plan	Comment
Capex planned for renewable electricity development	3	1.2%	2015	The figures include data related to hydroelectric energy and other renewable energy. The figure is in M Euros.

Module: Sign Off

Page: Sign Off

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

Fabrizio Tucci – CSR Manager

CDP