

Module: Introduction**Page: Introduction**

CC0.1**Introduction**

Please give a general description and introduction to your organization.

As Turkey's leading communication and technology company, Turkcell has a total of 35.2 million subscribers as of 31 December 2013. Being the market leader in five of the nine countries where it operates with around 71.3 million subscribers as of 31 December 2013, Turkcell is a regional leader. Turkcell was one of the first operators in the world to use HSPA+ technology. Offering a speed of up to 43.2 Mbps with dual-carrier technology, Turkcell continues to work in order to make the latest technology available to its customers quickly. A wholly-owned subsidiary of Turkcell, Turkcell Superonline is the first telecommunication operator in Turkey to offer fiber wideband access to homes with speeds of up to 1000 Mbps. As of 31 December 2013, Turkcell covers around 86.17% of the Turkish population with its 3G network and 99.49% with its 2G network.

Turkcell had revenues of 11.4 billion TL (6 billion US Dollars) and assets of 21.3 billion TL (10 billion US Dollars) as of 31 December 2013. Listed in both the NYSE and ISE since July 2000, Turkcell is the only Turkish company listed in the NYSE.

The head office of Turkcell İletişim Hizmetleri A.Ş is located in İstanbul. During the years 2012 and 2013, there were no operational changes.

Furthermore Turkcell made a commitment to sustainability by signing the UN Global Compact in 2007. And as of 2008, we have been sharing our sustainability efforts with the public by means of corporate responsibility reports.

From an environmental perspective, our greatest efforts focus on the energy efficiency and optimization of Network Operations and Information Technologies departments. In line with our Quality and Environmental Policy, we have been implementing the ISO 9001:2008 Quality Management System since 1999 and ISO 10002:2004 Customer Complaint Management System since 2011. In addition ISO 50001 Energy Management System Certificate will be streamlined into the Integrated Management System. Currently, the implementing process of ISO 50001 is in progress.

CC0.2

Reporting Year

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

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

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

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

Enter Periods that will be disclosed

Tue 01 Jan 2013 - Tue 31 Dec 2013

CC0.3**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

Turkey

CC0.4**Currency selection**

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

USD(\$)

CC0.6**Modules**

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sectors, companies in the oil and gas industry, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco 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@cdp.net.

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

Further Information

Module: Management

Page: CC1. Governance

CC1.1

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

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

CC1.1a

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

The final execution power for climate related decisions in Turkcell is the CEO. Turkcell executive management divides the climate GHG emission issues into two:

1) GHG emission calculation, reduction and energy efficiency issues: Climate and GHG emissions related technical issues are evaluated for mitigation and adaptation process by the Energy and Site Products Manager. All proposals from the technical staff for improvement are considered, energy efficiency or renewable energy projects are designed. The final review for these actions is done by the Chief Network Technologies Officer and presented to the CEO for approval.

2)Climate centred stakeholder, corporate engagement and sustainability issues: All climate change related corporate engagement such as raising public awareness is run by the Corporate Social Responsibility Director. All relevant action is designed and activities are planned with respect to Turkcell climate strategy outline and presented to the CEO for approval.

Turkcell plans to establish an Energy Management Committee which will be coordinated by Energy and Site Products Manager. The Committee will evaluate energy and GHG emissions related issues and discuss proposals for solution. Energy and Site Products Manager will regularly update Corporate Social Responsibility Director regarding the resolutions reached by the Committee.

CC1.2

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

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator
All employees	Recognition (non-monetary)	Contributing to the development of people and new ideas with improvement solutions for all areas
Corporate executive team	Recognition (non-monetary)	Informing investors
Other: Network Director	Other non-monetary reward	Implementation of effective energy management systems and low carbon emission practices

Further Information

Page: CC2. Strategy

CC2.1

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

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

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

Frequency of monitoring	To whom are results reported	Geographical areas considered	How far into the future are risks considered?	Comment
Annually	Individual/Sub-set of the Board or committee appointed by the Board	Whole Company areas	3 to 6 years	The Assessment for Risk and Opportunities considers all factors of regulation, physical change, and the changing demand for company services. These related variables are quantified and modeled within integrated risk management process.

CC2.1b

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

Turkcell Climate Strategy Brief has been drafted which bases on four main aspects; Mitigation, Adaptation, New Business Models and Climate Centered Corporate Communication and Stakeholder Participation. The Climate strategy Brief contains major steps for how carbon-related risks are managed at a company and asset level. The noncommercial sensitivities results of the various elements of our risk and opportunity management process are presented to all relevant stakeholders through our sustainability communications, including our web site, annual Sustainability Report.

CC2.1c

How do you prioritize the risks and opportunities identified?

The main driver for prioritization of these factors is time and the related financial impact. Impact to occur sooner and with stronger financial impact is prioritised. Yet, the cost to occur further in time but that can be abated through measures which can only be implemented sooner is also prioritised.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment
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CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

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

Transition to low carbon economy is vital for most businesses but it is especially a sensitive process for Information and Telecommunication companies. ITCs are energy dependent and energy intensive companies and they have geographically scattered stations. They have to sustain providing contact and communication in emergency conditions such as natural disasters. A global IT company like Turkcell faces a group of interrelated challenges in transitioning itself to the low carbon economy while managing risks and opportunities. The strategy for the transition could be based on four main aspects:

1. Mitigation:

The first and the most vital phase of low carbon economy is still the action for mitigation of global GHG emissions through efficiency, new technology and switching

to renewable energy resources. Mitigation of GHG emissions by Turkcell includes these major steps:

1. Improving Data Center Infrastructure Efficiency (DCIE)

- Reclaiming energy by avoiding cooling inefficiencies, upgrading the cooling system, allowing variable cooling and making greater use of outside air,
- Consolidation and virtualization of server utilization,
- Calibrating aisle temperatures and matching server capacity to load in real time,
- Correlating facility emergency procedures to minimize the impact of outages,
- Determining the actual power consumption to maximize server capacity,
- Switching from transfer switch to AC/DC distribution for better use of renewable energy resources such as solar power cells,
- High level of cooperation between facility and IT managers for consistency,
- Cost accounting to monetize the data centers to motivate financial rewards.

2. Decreasing the data center or facility based energy consumption

- Investing in new renewable energy technology for data centers and stations such as solar power cells and wind,
- Improving the building conditions of management, stores and call centers,
- Minimizing commute and travel through video conferences and online communication platforms,
- Switching to energy efficient or electric company cars.

2. Adaptation

The recent IPCC (Intergovernmental Panel on Climate Change) report claims that, based on the insufficient global effort to mitigate the GHG emissions so far and the anticipated increase of GHG emissions especially by the emerging economies, some increase in global temperature between 3 and 5 Celsius on average is inevitable. Such forecast obliges the companies to be prepared for physical change that may disrupt business conditions. The adaptation of Turkcell to the new physical conditions of climate change may have these major steps:

- Assessing the geographic conditions of data centers and stations to forecast physical impact such as high temperature increase, flooding and storms,
- Building an infrastructure reinforcement plan based on the assessment above,
- Investing in the new insulation and impermeability technologies,
- Planning for emergency data center allocation in terms of non-repairable impact of instant physical change such as floods.

3. New Business Models

Climate change and the resulting conditions will eventually force the governments to formulate new regulations to force the businesses to mitigate the GHG emissions and adapt the new climate conditions. On the other hand the consumers and other stakeholders will demand new products and service tools that will meet these new requirements. Or else, consumers will favor certain products and services only because they are more climate-friendly. As much as these new business conditions may seem a source of risk for the corporates, they may be a source of new business opportunities. A paradigm shift with the picture of the new business structure under climate change means more business with innovative service and products. Such innovation within Turkcell can be realized by;

- Identifying the potential regulations such as emission caps and formulating strategies to meet the cap and become an emission reduction allowance seller in the market,
- Providing a futuristic approach to new products such as disaster alert, agricultural yield forecasts and disaster relief management,
- Creating new climate friendly products and services that will reinforce the identity of “corporate social responsibility”,

4. Climate Centered Corporate Engagement and Stakeholder Participation

As the society becomes more climate conscious and the public understanding of “personal benefit” evolves into “climate responsibility” under low carbon economy, it will become more important for companies to center their corporate engagement towards climate and related environmental issues. On the other hand, involving stakeholders and attending to their influence on climate related corporate strategy would become more sensitive. In that sense, Turkcell could;

- Contribute in raising public awareness for combat against climate change,
- Delivering the message to the governmental bodies and lobbying for the interest of the society,
- Cooperating for NGOs and other stakeholders and business groups to formulate climate change management strategies,
- Maintaining communication with the consumers, attending to their needs for new tools and services with respect to new low carbon economy,
- Building interest in innovation of new technology by cooperating with academia and research centers,
- Creating new B2B and B2C financial mechanisms to support research for new efficient technology and better use of renewable resources.

It is obvious that, in near future, a vital part of corporate risk management and strategy will depend on maintaining business under new climate conditions, regulations and the ability to transition to low carbon economy. The definition of business success and best practice will be redefined with respect to capability of developing business and maintaining market share, revenue and also reputation while the conditions change rapidly and drastically in the next two decades. Such capability is called “corporate climate resilience” and Turkcell aims at developing resilience by applying certain measures defined within four main areas as defined above.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.3

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

Direct engagement with policy makers

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Energy efficiency	Support	The Ministry of Transport, Maritime Affairs and Communication has organized an initiative named Green ICT and Turkcell provided feedback to form the basic principles and the actions to be taken by the industry for sustainable business.	Green ICT business principles.
Clean energy generation	Support	Turkcell develops renewable energy projects for the zones that fall far from the grid. Those activities also target improvement of sustainability. Turkcell works closeley with the Ministry of Energy and Natural Resources for incentives to expand these projects to new areas.	Incentives for micro scale renewable projects to expand the renewable energy generation at different sites.
Adaptation resiliency	Support	Turkcell is a member to Turkish Industry and Business Association (TUSIAD). TUSIAD is part of the Climate Change Coordination Committee (IDKK) which is the most executive governmental decision making body in Turkey. TUSIAD represents large scale industry in the committee and Turkcell contributes TUSIAD efforts to influence the major climate related decisions by the government.	IDKK (Climate Change Coordination Committee) of Turkey issues directives every six months and communicates various policies with different governmental policy makers. TUSIAD proposes GHG mitigation and adaptation policies at the Committee.

CC2.3b

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

CC2.3c

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

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?

CC2.3d

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

CC2.3e

Do you fund any research organizations to produce or disseminate public work on climate change?

CC2.3f

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

CC2.3g

Please provide details of the other engagement activities that you undertake

CC2.3h

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

Turkcell has recently prepared a corporate Climate Strategy Outline to define its overall climate change strategy and how it will be integrated to its corporate risk management. Both Corporate Social Responsibility Officer and Energy and Site Products Manager are responsible with maintaining the consistency of all Turkcell activities with the climate strategy outline paper. Both Directors review the climate strategy and the Turkcell activities and projects quarterly and assure consistency.

The Climate Strategy Outline is reviewed by both Directors annually, required changes are discussed with related departments and later proposed to the CEO. After the approval by the CEO, the final version of the Outline document is distributed within the Company.

CC2.3i

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

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

No

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions (metric tonnes CO2e)	Target year	Comment
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CC3.1b

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
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CC3.1c

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

CC3.1d

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

ID	% complete (time)	% complete (emissions)	Comment

CC3.1e

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

(i) We have accelerated the rollout of energy efficiency measures but, despite our efforts currently it is hard to identify a representative year which would enable us to compare our performance with previous years. Therefore, we identify, analyze and assess any risks and opportunities arising from the processes and activities of our departments, which may affect the realization of targets and submit them for approval of the department head.

(ii) By integrating our technology with our processes, we implement effective energy management and low carbon emission practices, and work in an environmentally-friendly manner to utilize resources at a high efficiency rate. While planning our products, services and investments, we take energy-environment interaction into consideration. We expect that our emissions will decrease over the five years

CC3.2

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

Yes

CC3.2a

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

M2M Solutions

M2M (Machine to Machine) is a new technology designed to enable machines to be managed and monitored remotely and communicate to each other through a specified SIM card. Thanks to our M2M solutions, we helped 1.4 million users achieve savings of more than 526,038,926 USD (1 billion TL) in total as of the end of 2013. M2M is affecting daily routine of individuals and also businesses. Due to its capability and extensive reach, M2M enables the creation of new business models for companies. M2M solutions for vehicle tracking system are widely being used right now. Medical automation in health industry and smart home solutions are some of the areas where M2M is already in use and provides endless possibilities.

M2M solutions can be categorized under six headlines: Smart Energy, Smart Industry, Smart Vehicle, Smart Health and Mobile POS and Registry. Meter reader, logistics, POS and ATM on financial services and even registry, farming and POS machines, refrigerators and dispensers, home security systems, A/C's, vehicles, trucks, boats, train, bicycles and helicopters, glasshouses, farms, poultry and field sprinkle systems and readers are, all 1,2 million machines, being monitored and managed by Turkcell M2M technology. We launched the first M2M platform and M2M-specific SIM card, and we are the only operator that offers both vertical solutions and an M2M module in Turkey. In 2013, we transformed more than 450,000 vehicles into Smart Vehicles with Turkcell's M2M infrastructure, which resulted in annual fuel savings of nearly 526,038,926 USD (1 billion TL) in Turkey. With more than 100,000 smart energy and water meters, we help to achieve a 10-15% reduction in electricity and water consumption. We offer added value to 21 Electricity Distribution Companies in Turkey with our M2M Solutions. As of today, savings of more than 210,415USD (400,000 TL) has been achieved in this area. With our M2M applications in industrial fields such as agriculture, cold chain and electronics, our contribution to the national economy reached 52,603USD (100,000 TL) in 2012-2013.

Vehicle tracking, guidance and on-the-road communication systems result in a 15-20% fuel savings. According to an ICTA report, we were the market leader in 2013 in both mobile POS solutions and vehicle tracking (fleet management) applications. Turkey's first domestic electric car also became remote-controlled through Turkcell M2M.

Source: AVERAGE EXCHANGE RATES <http://www.bumko.gov.tr/TR,150/doviz-kurlari.html>

CC3.3

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

Yes

CC3.3a

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

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*		
Implemented*	9	55474
Not to be implemented		

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
Energy efficiency: Building services	As of 2011, we switched to LED lighting for less power consumption in our lighting systems. In 2012-2013, we replaced the lighting system of an entire building with an LED system, achieving energy savings of 0.4 million kWh. We replaced 5% of the pumps and engines completing their life-cycle with frequency-controlled devices that reduce energy consumption. This resulted in savings of 0.2 million kWh. Furthermore, in 2013, we switched to natural gas in the service buildings in İzmir, Diyarbakır and Erzurum, achieving energy savings of 30%. We reduced the fuel consumption of boilers by 15% by using an efficiency device that controls the burner with a special microprocessor.	275.76	60000		1-3 years	10	
Low carbon energy installation	We installed hybrid communication units, which allows using wind turbine power and network electricity alternately, and set up solar and wind power-operated communication units at 24 locations where network electricity was not available.	26794.58	5830000		1-3 years	20	
Energy efficiency: Building services	We worked to achieve more energy savings in the electrical and mechanical systems of our buildings. These efforts resulted in energy savings of 5 million kWh	2297.99	500000		4-10 years	29	
Energy efficiency: Processes	Energy Savings for the Network Operations Department - highly-efficient rectifier units located in Turkcell's network	3027.17	658657		1-3 years	10	
Energy efficiency: Processes	Energy Savings for the Network Operations Department- free cooling systems	635.95	138372		1-3 years	10	
Energy efficiency: Processes	Energy Savings for the Network Operations Department - site-mounted free cooling equipment	2733.98	594863		1-3 years	10	
Energy	Energy Savings for the Network Operations Department -	1712.92	372700		1-3	10	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
efficiency: Processes	inverter air-conditioners				years		
Energy efficiency: Processes	Energy Savings for the Network Operations Department - 14,076 units of site-mounted air-conditioning equipment	15514.20	3375600		1-3 years	10	
Energy efficiency: Processes	Energy savings for data centers (The rate of energy consumption reduction was 18% in 2013.)	2481.83	540000		1-3 years	10	

CC3.3c

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

Method	Comment
Dedicated budget for energy efficiency	We conduct all of our activities in accordance with our environmental policy. Within the scope of our environmental impact, energy efficiency is the area we can achieve highest level of improvements. Therefore, energy efficient solutions weight the most among our environmental-friendly implementations. The investment made in 2013 by using these solutions reached 6,102,051 (11.6 million TL)*, together with capacity increases and newly set up sites. *Turkcell Group data for 2013.

CC3.3d

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

Further Information

The actual CO2e savings of the total number of implemented projects in 2013.

Attachments

[https://www.cdp.net/sites/2014/45/21145/Investor CDP 2014/Shared Documents/Attachments/InvestorCDP2014/CC3.TargetsandInitiatives/the CO2e savings via implemented projects.xlsx](https://www.cdp.net/sites/2014/45/21145/Investor%20CDP%202014/Shared%20Documents/Attachments/InvestorCDP2014/CC3.TargetsandInitiatives/the%20CO2e%20savings%20via%20implemented%20projects.xlsx)

Page: CC4. Communication

CC4.1

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

Publication	Page/Section reference	Attach the document
No		

Further Information**Module: Risks and Opportunities****Page: CC5. Climate Change Risks**

CC5.1

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

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

CC5.1a

Please describe your risks driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
International agreements	Turkey joined the Partnership for Market Readiness (PMR) in April 2011. A preparation grant for Turkey was approved by the Partnership Assembly (PA) in May 2011. Turkey submitted a draft Market Readiness Proposal (MRP) to the PMR Secretariat on February 2013, and presented it to the PA at PA5 meeting in Washington, DC on March 2013. Being a party to the United Nations Framework Convention on Climate	Increased operational cost	>6 years	Indirect (Client)	Very likely	Medium	Not estimated yet.	Identifying the clients under risk	Communication cost may increase by less than 1%.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Change (UNFCCC) and its Kyoto Protocol (KP), Although Turkey has no emission reduction target within the scope of KP she has developed strategies, action plans, and programs to promote energy efficient, low carbon technologies. Additionally, Turkey displays an active commitment in the development of a voluntary emission market with its integration to compliance markets and conducts projects regarding the determination of emission reduction potential. Most probably these developments might directly and indirectly (through customers) influence Tukcell's operational investment costs to meet own and customer compliance requirements.								
Cap and trade schemes	Turkey is also a candidate country to the European Union (EU), and has been taking the necessary steps for the full implementation of the EU Emission Trading Scheme (EU-ETS)	Increased operational cost	3 to 6 years	Indirect (Supply chain)	Very likely	Medium	Cost of energy supply may increase by 10%.	Investment in alternative energy resources.	Increasing R&D expensess by 10% and increasing energy investment by 20%.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	directive, which is part of the environmental acquis. As part of these steps, in April 2012, Turkey enacted an EU-ETS compatible MRV regulation for the industry and power sectors, establishing the framework for a potential market mechanism under the UNFCCC. We also demand energy to power the network and our operations. While we are making improvements in the efficiency of our operations and fleet, fuel/energy taxes and regulations could impact our company.								
Fuel/energy taxes and regulations	We are impacted by fuel prices and increasing energy taxes. We also demand energy to power the network and our operations. While we are making improvements in the efficiency of our operations and fleet, fuel/energy taxes and regulations could impact our company	Increased operational cost	1 to 3 years	Direct	Very likely		Cost of energy supply may increase by 10%.	Investment in alternative energy resources.	Increasing R&D expenses by 10% and increasing energy investment by 20%.

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in temperature extremes	Higher temperatures result in higher cooling costs and problems in DC feeding equipment/systems. These might be potential damage to network equipment and increased power to cool network equipment.	Increased operational cost	Up to 1 year	Direct	Very likely	High	Energy and maintenance expenses increasing	Investing in new technology	Related investments increase by 10 to 20%.
Change in precipitation extremes and droughts	Potential damage to network equipment and property from flooding or Extreme drought that leads to water shortages could compromise our ability to effectively cool our facilities and push us to use more energy, which will drive up our costs and emissions.	Increased operational cost	Up to 1 year	Direct	Very likely	High	Insulation and maintenance expenses increasing.	Investing in new technology	Related investments increase by 10 to 20%.
Change in mean (average) precipitation	Fluctuations in temperatures make it difficult to predict energy needs for the year. In addition, this sometimes causes increased stress on the electricity grid, which forces Turkcell to run its engines more, releasing more GHG emissions.	Increased operational cost	Up to 1 year	Direct	Very likely	High	Insulation and maintenance expenses increasing.	Investing in new technology	Related investments increase by 10 to 20%.

CC5.1c

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
Reputation	Public awareness related to climate change will increase with the help of MRV Organizing public awareness raising campaigns for combating climate change end of 2014 .	Other: Competitive disadvantage	Up to 1 year	Direct	More likely than not	Medium	Changing consumer demand	Increasing climate centered public communication	Increasing corporate communication costs by 10%
Fluctuating socio-economic conditions	At the point where climate change impacts on the economic wealth of our customer base, Turkcell will need to adapt to the shift in socio-economic circumstances of it's customer base.	Reduced demand for goods/services	Unknown	Direct	Very unlikely	Low	Changing consumer demand	Increasing climate centered public communication	Increasing corporate communication costs by 10%
Changing consumer behaviour	Recently, level of environmental awareness is increased by Turkish customers. At the same time, competitors also more actively communicate their sustainability initiatives and products on the market. We highly expect this trend to continue and customers to ask about the company's ability to manage climate related issues such as energy and GHG emissions or more environmentally-friendly services and products.	Reduced demand for goods/services	1 to 3 years	Direct	More likely than not	Low	Changing consumer demand	Increasing climate centered public communication	Increasing corporate communication costs by 10%

CC5.1d

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

CC5.1e

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

CC5.1f

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

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

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

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

CC6.1a

Please describe your opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
International agreements	Being a party to the UNFCCC and its KP, although Turkey has no emission reduction target within the scope of KP she has developed strategies, action plans, and programs to promote energy efficient, low carbon technologies. Additionally, Turkey displays an active commitment in the development of a voluntary emission market with its integration to	Increased demand for existing products/services	3 to 6 years	Indirect (Client)	Likely	Medium	Increasing revenue	Revenue management	Negligible

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	compliance markets and conducts projects regarding the determination of emission reduction potential. It is clearly seen that Turkey will take steps to establish a carbon trade mechanism. Even though, it is not expected to directly impact the ICT sector, an increasing number of companies have started to quantify and manage their emissions. This								
Cap and trade schemes	Turkey has been taking the necessary steps for the full implementation of the EU-ETS directive, which is part of the environmental acquis. As part of these steps, in April 2012, Turkey enacted an EU-ETS compatible MRV regulation for	Increased demand for existing products/services	3 to 6 years	Indirect (Client)	Likely	Medium	Increasing revenue	Revenue management	Negligible

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	the industry and power sectors, establishing the framework for a potential market mechanism under the UNFCCC. The most clear sign that Turkey will take steps to establish a carbon trade mechanism. Our M2M technology helps utility companies can keep track of the amount of electricity fed into the grid from individual locations remotely.								
Fuel/energy taxes and regulations	The potential of smart mobile applications (M2M) is observed particularly in smart transportation and logistics with smart grids and meters. M2M applications in 2013; more than 450,000 vehicles were transformed into Smart Vehicles with	Increased demand for existing products/services	3 to 6 years	Direct	Likely	Medium	Increasing revenue	Revenue management	Negligible

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Turkcell's M2M infrastructure, which resulted in annual fuel savings of nearly 526,038,926 USD (1 billion TL) for Turkey, the energy bills of corporate customers were reduced by up to 30%.								

CC6.1b

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in temperature extremes	Changes in mean temperature has in part prompted installation of new technology that itself allows Turkcell the opportunity to save money and emissions such as by using wind turbine power and network electricity alternately, and set up	Increased demand for existing products/services	3 to 6 years	Direct	Likely	Low	Increasing revenue	Revenue management	Negligible

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	solar and wind power-operated communication units at 24 locations where network electricity was not available. In addition to these units, we achieved energy savings of 58.3 million kWh in 2013.								
Change in precipitation extremes and droughts	In order to take advantage of this opportunity, under the Business Continuity Management System, solutions are actively developed for all of our customers to use in case of disasters or emergencies. Detailed information about some of these solutions, i.e. "Urgent SMS", "Disaster and Emergency Service" and "Earthquake Service"	Reduced operational costs	Up to 1 year	Direct	Very likely	Medium	Increasing revenue	Revenue management	Negligible
Change in mean (average) temperature	Changes in mean temperature has in part prompted installation of new technology that itself allows Turkcell the opportunity to save money and emissions such as by introducing the newly-mounted free cooling equipment, and in 2013, we achieved	Reduced operational costs	Up to 1 year	Direct	Very likely		Increasing revenue	Revenue management	Negligible

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	annual energy savings of 1,383,716 kWh thanks to the free cooling systems newly included in the network. Furthermore the annual energy savings resulting from a total of 14,076 units of site-mounted air-conditioning equipment used in Turkcell's network was 33,756,000 kWh.								

CC6.1c

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Public awareness related to climate change will increase, the environmental performance of companies will become more of an issue. Therefore, we aimed at increasing the awareness related to	Increased demand for existing products/services	Up to 1 year	Direct	Very likely	Medium	Increasing revenue	Revenue management	Negligible

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	environment and climate change.								
Changing consumer behaviour	Level of environmental awareness is increased by Turkish customers. At the same time, competitors also more actively communicate their sustainability initiatives and products on the market. We highly expect this trend to continue and customers to ask about the company's ability to manage climate related issues such as energy and GHG emissions .	Increased demand for existing products/services	Up to 1 year	Direct	Very likely	Medium	Increasing revenue	Revenue management	Negligible
Other drivers	Increase demand for 'smart' solutions including smart grid and smart logistics from Governments and commercial customers.	Increased demand for existing products/services	Up to 1 year	Direct	Virtually certain		Increasing revenue	Revenue management	Negligible

CC6.1d

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

CC6.1e

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

CC6.1f

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

Further Information

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

Page: CC7. Emissions Methodology

CC7.1

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

Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)
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Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)
Tue 01 Jan 2013 - Tue 31 Dec 2013	8391	243054

CC7.2

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

Please select the published methodologies that you use
Defra Voluntary Reporting Guidelines
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
Other

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

IEA (2012). CO2 Emissions from Fuel Combustion, 2012 Edition, Highlights. International Energy Agency is used for Scope 2 emissions.

CC7.3

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

Gas	Reference
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	IPCC Fourth Assessment Report (AR4 - 100 year)

CC7.4

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

Fuel/Material/Energy	Emission Factor	Unit	Reference
Natural gas	0.00201	metric tonnes CO2 per m3	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, Chapter 1
Diesel/Gas oil	0.00266	metric tonnes CO2 per liter	Defra/DECC (2012). Guidelines to Defra/DECC's GHG conversion factors for company reporting. Department of Environment Food and Rural Affairs/Department for Energy and Climate Change, London.
Other: HFCs	0.001	Other: metric tonnes HCFC-22 per kg	IPCC (2007). IPCC Fourth Assessment Report: Climate Change 2007.
Electricity	0.00046	Other: metric tonnes CO2 per kWh	IEA (2012). CO2 Emissions from Fuel Combustion, 2012 Edition, Highlights. International Energy Agency.

Further Information**Attachments**

[https://www.cdp.net/sites/2014/45/21145/Investor CDP 2014/Shared Documents/Attachments/InvestorCDP2014/CC7.EmissionsMethodology/Turkcell GHG Calculation.xlsx](https://www.cdp.net/sites/2014/45/21145/Investor%20CDP%202014/Shared%20Documents/Attachments/InvestorCDP2014/CC7.EmissionsMethodology/Turkcell%20GHG%20Calculation.xlsx)

Page: CC8. Emissions Data - (1 Jan 2013 - 31 Dec 2013)

CC8.1

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

Operational control

CC8.2

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

8391

CC8.3

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

243054

CC8.4

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

No

CC8.4a

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

Source	Relevance of Scope 1 emissions from this source	Relevance of Scope 2 emissions excluded from this source	Explain why the source is excluded
--------	---	--	------------------------------------

CC8.5

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

Scope 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 10% but less than or equal to 20%	Data Gaps Assumptions Metering/ Measurement Constraints Data	The main source of uncertainty is inaccurate billing information. Turkcell has over 35000 base stations and each of them is separate energy consumption point. Therefore measuring at site is usually impractical.	More than 2% but less than or equal to 5%	Metering/ Measurement Constraints	The electricity consumption figures are rounded off automatically in the monitoring system, but this is estimated to create an uncertainty of less than 2% as the rounding is not significant.

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
	Management				

CC8.6

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

No third party verification or assurance

CC8.6a

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

Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission
------------	--------------------------------------	-------------------	------------------------

CC8.7

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

No third party verification or assurance

CC8.7a

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

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of Scope 2 emissions verified (%)
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CC8.8

Please identify if any data points other than emissions figures have been verified as part of the third party verification work undertaken

Additional data points verified	Comment
No additional data verified	

CC8.9

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

No

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2013 - 31 Dec 2013)

CC9.1

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

No

CC9.1a

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

Country/Region	Scope 1 metric tonnes CO2e
----------------	----------------------------

CC9.2

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

By business division
By GHG type
By activity

CC9.2a

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

Business division	Scope 1 emissions (metric tonnes CO2e)
Base Stations	2257
HQ Buildings	6134

CC9.2b

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

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
----------	--	----------	-----------

CC9.2c

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

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	8333
CH4	4.16
N2O	53.89

CC9.2d

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

Activity	Scope 1 emissions (metric tonnes CO2e)
Heating	913
Vehicles	4959
Generators	2516

CC9.2e

Please break down your total gross global Scope 1 emissions by legal structure

Legal structure	Scope 1 emissions (metric tonnes CO2e)
-----------------	--

Further Information

Turkcell A.Ş has also collected the top-up quantity of cooling gases data from Base stations and Data Centers. HCFC-22/R22 is used in refrigerants and cooling equipments and it is a Non-Kyoto gas. According to results, the amount of emissions that sourced from the cooling activities is calculated as 18783 tCO2e.

Attachments

[https://www.cdp.net/sites/2014/45/21145/Investor CDP 2014/Shared Documents/Attachments/InvestorCDP2014/CC9.Scope1EmissionsBreakdown\(1Jan2013-31Dec2013\)/Refrigerant emissions\(Non-Kyoto\).xlsx](https://www.cdp.net/sites/2014/45/21145/Investor%20CDP%202014/Shared%20Documents/Attachments/InvestorCDP2014/CC9.Scope1EmissionsBreakdown(1Jan2013-31Dec2013)/Refrigerant%20emissions(Non-Kyoto).xlsx)

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2013 - 31 Dec 2013)

CC10.1

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

No

CC10.1a

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

Country/Region	Scope 2 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted for CC8.3 (MWh)
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CC10.2

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

By business division

CC10.2a

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

Business division	Scope 2 emissions (metric tonnes CO2e)
Base Stations	198694
HQ Buildings	8780
Data Centers	13862
Network Data Centers	21718

CC10.2b

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

Facility	Scope 2 emissions (metric tonnes CO2e)
----------	--

CC10.2c

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

Activity	Scope 2 emissions (metric tonnes CO2e)
----------	--

CC10.2d

Please break down your total gross global Scope 2 emissions by legal structure

Legal structure	Scope 2 emissions (metric tonnes CO2e)
-----------------	--

Further Information

Page: CC11. Energy

CC11.1

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

More than 0% but less than or equal to 5%

CC11.2

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

Energy type	MWh
Fuel	23729
Electricity	526000
Heat	4234
Steam	
Cooling	

CC11.3

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

Fuels	MWh
Diesel/Gas oil	24838
Natural gas	3124

CC11.4

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

Basis for applying a low carbon emission factor	MWh associated with low carbon electricity, heat, steam or cooling	Comment
Non-grid connected low carbon electricity generation owned by company, no instruments created	252288	As of 2013, 24 sites in Turkcell's network operate with renewable energy; there is no powerline in those sites.

Further Information

Page: CC12. Emissions Performance

CC12.1

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

This is our first year of estimation

CC12.1a

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

Reason	Emissions value (percentage)	Direction of change	Comment

CC12.2

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

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
0.02774	metric tonnes CO2e	unit total revenue		N/A	

CC12.3

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

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
59.01	metric tonnes CO2e	FTE employee		N/A	

CC12.4

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

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
0.00714	metric tonnes CO2e	Other: Unit of total subscriber		N/A	

Further Information

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership

CC13.1b

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

CC13.2

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

No

CC13.2a

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

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance

Further Information

Page: **CC14. Scope 3 Emissions**

CC14.1

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

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using primary data	Explanation
Purchased goods and services	Relevant, not yet calculated				
Capital goods	Relevant, not yet calculated				
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, not yet calculated				
Upstream transportation and distribution	Relevant, not yet calculated				
Waste generated in operations	Relevant, not yet calculated				
Business travel	Relevant, not yet calculated				

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using primary data	Explanation
Employee commuting	Relevant, not yet calculated				
Upstream leased assets	Relevant, not yet calculated				
Downstream transportation and distribution	Relevant, not yet calculated				
Processing of sold products	Not relevant, explanation provided				Our products are not processes (ie not raw materials).
Use of sold products	Relevant, not yet calculated				
End of life treatment of sold products	Relevant, not yet calculated				
Downstream leased assets	Relevant, not yet calculated				
Franchises	Relevant, not yet calculated				
Investments	Relevant, not yet calculated				
Other (upstream)	Relevant, not yet calculated				
Other (downstream)	Relevant, not yet calculated				

CC14.2

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

No third party verification or assurance

CC14.2a

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

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of Scope 3 emissions verified (%)
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CC14.3

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

No, we don't have any emissions data

CC14.3a

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

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
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CC14.4

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

Yes, our customers

CC14.4a

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

By integrating our technology with our processes, we implement effective energy management and low carbon emission practices, and work in an environmentally-friendly manner to utilize resources at a high efficiency rate. While planning our products, services and investments, we take energy-environment interaction into consideration.

With this perspective, Mobile communication makes it possible to significantly reduce the release of carbon dioxide and energy costs in different sectors of the economy. It even creates the possibility for more savings. These savings are achieved by using the virtual alternatives of travel, products, services and processes thanks to the smart applications made available to a large extent by machine to machine (M2M) communication. The potential of smart mobile applications is observed particularly in smart transportation and logistics with smart grids and meters.

Below is a summary of the benefits achieved in the use of natural resources with the products and services offered to our customers in 2013 as part of M2M applications:

- More than 450,000 vehicles were transformed into Smart Vehicles with Turkcell's M2M infrastructure, which resulted in annual fuel savings of nearly 1 billion TL for Turkey.
- With smart energy and water meters, we helped to achieve a 10-15% reduction in electricity and water loss/theft
- The energy bills of corporate customers were reduced by up to 30% thanks to the Smart Reactive Management Service.
- Vehicle tracking, guidance and on-the-road communication systems resulted in a 15-20% fuel savings

CC14.4b

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

Number of suppliers	% of total spend	Comment
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CC14.4c

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

How you make use of the data

Please give details

CC14.4d

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

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

Name	Job title	Corresponding job category
Zeynep Özbil	Director, Sustainability and Corporate Affairs	Environment/Sustainability manager

Further Information

Module: ICT

Page: ICT1. Data center activities

ICT0.1a

Please identify whether "data centers" comprise a significant component of your business within your reporting boundary

Yes

ICT1.1

Please provide a description of the parts of your business that fall under "data centers"

DC are data centers that contain servers, storage backups and physical infrastructures of services that are managed by ICT (Information and Communication Technologies) department. There are also 10 ICT (Information and Communication Technologies) data centers in our network. They are located in Istanbul (Kartal and Maltepe), Ankara (Söğütözü) and İzmir (Bornova).

Base stations allow the signal to be transmitted between user's mobile phone and operator's MSC server. Base stations are established locally and can give service to a certain radius. Maximum service area a base station may give service is 20-30 kilometers. A base station consists of a cabinet that contains electronic circuit board allowing signal process, antenna, pole for building tops or tower for rural areas, energy infrastructure materials, air conditioner etc.

ICT1.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the data centers component of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method
Data centers		13862	30000	Meter or submeter reading

ICT1.3

What percentage of your ICT population sits in data centers where Power Usage Effectiveness (PUE) is measured on a regular basis?

Percentage	Comment
100%	100% of our ICT hardware sits in data centers where Power Usage Effectiveness

Percentage	Comment
	(PUE) is measured on the regular basis.

ICT1.4

Please provide a Power Usage Effectiveness (PUE) value for your data center(s). You can provide this information as (a) an average, (b) a range or (c) by individual data center - please tick the data you wish to provide (tick all that apply)

Individual data center

ICT1.4a

Please provide your average PUE across your data centers

Number of data centers	Average PUE	% change from previous year	Direction of change	Comment

ICT1.4b

Please provide the range of PUE values across your data centers

Number of data centers	PUE Minimum Value	% change of PUE Minimum Value from previous year	PUE Maximum Value	% change of PUE Maximum Value from previous year	Direction of change	Comment

ICT1.4c

Please provide your PUE values of all your data centers

Data center reference	PUE value	% change from previous year	Direction of change	Comment
Istanbul	1.78		N/A	
Ankara	1.87		N/A	
İzmir	1.80		N/A	

ICT1.5

Please provide details of how you have calculated your PUE value

Other: Total Site Load in kW / UPS-Output kW

ICT1.6

Do you use any alternative intensity metrics to assess the energy or emissions performance of your data center(s)?

No

ICT1.6a

Please provide details on the alternative intensity metrics you use to assess the energy or the emissions performance of your data center(s)

ICT1.7

Please identify the measures you are planning or have undertaken in the reporting year to increase the energy efficiency of your data center(s)

Status in reporting year	Energy efficiency measure	Comment
Implemented	Cooling Efficiencies	<ul style="list-style-type: none"> • In 2013, Turkcell has achieved annual energy savings of 1,383,716 kWh thanks to the free cooling systems newly included in the network • The annual energy savings resulting from a total of 9,230 units of site-mounted free cooling equipment used in Turkcell's network was 5,948,626 kWh. • Replacing older systems with inverter air-conditioners resulted

Status in reporting year	Energy efficiency measure	Comment
		in annual energy savings of nearly 3,727,000 kWh. • The annual energy savings resulting from a total of 14,076 units of site-mounted air-conditioning equipment used in Turkcell's network was 33,756,000 kWh
Implemented	Power Management Efficiencies	• Turkcell has achieved energy savings of 6,586,566 kWh in 2013 with the 7,230 highly-efficient rectifier units located in Turkcell's network.
Implemented	Other	Turkcell has installed hybrid communication units, which allows using wind turbine power and network electricity alternately, and set up solar and wind power-operated communication units at 24 locations where network electricity was not available. Thanks to this investments, Turkcell has achieved energy savings of 58,300,000 kWh in 2013.

ICT1.8

Do you participate in any other data center efficiency schemes or have buildings that are sustainably certified or rated?

No

ICT1.8a

Please provide details on the data center efficiency schemes you participate in or the buildings that are sustainably certified or rated

Scheme name	Level/certification (or equivalent) achieved in the reporting year	Percentage of your overall facilities to which the scheme applies

ICT1.9

Do you measure the utilization rate of your data center(s)?

Yes

ICT1.9a

What methodology do you use to calculate the utilization rate of your data center(s)?

PUE value of Data center is calculated according to Green Grid Methodology 'PUE™: A Comprehensive Examination of the Metric' .This document provides guidelines for determining the PUE of a dedicated data center and that of a mixed-use facility or specialized facility, along with results, scalability analyses, and case studies.

PUE is calculated using the below formula;

Total Facility Power ÷ IT Equipment Power

ICT1.10

Do you provide carbon emissions data to your clients regarding the data center services they procure?

No

ICT1.10a

How do you provide carbon emissions data to your clients regarding the data center services they procure?

ICT1.11

Please describe any efforts you have made to incorporate renewable energy into the electricity supply to your data center(s) or to re-use waste heat

We are aware that our responsibility toward the ecological environment starts with reducing the energy used in business processes. Accordingly, we continue to invest in alternative energy and work to reduce energy consumption by leveraging state-of-the-art technologies. As of 2013, 24 sites in Turkcell's network operate with renewable energy; there is no powerline in those sites. The annual renewable electricity generation of these sites is solar and wind power. We also work on Hydrogen fuel cells. Currently fuel cells stacks are installed at three of our sites as back up units. Turkcell has a team that is focusing on energy management. At this team we are working on alternative energy solutions, monitoring our site energy consumptions and making our base stations work more energy efficiently.

We also work with universities and governmental agencies about products we use at our base stations. Currently we have a battery test procedure and every battery brand that is purchased has to pass this procedure. Tests are made by The Scientific and Technological Research Council of Turkey (TUBITAK). Similarly we are working on preparing a test procedure for air conditioners with Istanbul Technical University (ITU) Energy Institute. There are also some university trainees at different departments of Turkcell working on specific topics.

Further Information**Page: ICT2. Provision of network/connectivity services**

ICT0.1b

Please identify whether "provision of network/connectivity services" comprises a significant component of your business within your reporting boundary

Yes

ICT2.1

Please provide a description of the parts of your business that fall under "provision of network/connectivity services"

NDC are network data centers. They consist of switching centers and databases like MSC, HLR, MGW etc. MSC (Mobile Switching Center) servers are swithing units used in mobile networks. This structural element is a telephone exchange that enables connection between mobile users in same or different networks. MSC also enables conection between mobile network and public switched telephone network. While enabling these connections MSC uses other servers and databases lika MGW (Media Gateway), HLR (Home Location Register) and VLR (Visitor Location Register). There are 26 network data centers at Turkcell network. These servers are located in Adana, Adapazarı, Ankara, Antalya, Balıkesir, Bursa, Denizli, Diyarbakır, Erzurum, Eskişehir, Gaziantep, Hatay, İstanbul, İzmir, Kayseri, Kocaeli, Konya, Malatya, Manisa, Mersin, Muğla, Samsun, Tekirdağ, Trabzon, Van, Zonguldak.

ICT2.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the provision of network/connectivity services component of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method
Provision of network/connectivity services		21718	47000	Meter or submeter reading

ICT2.3

Please describe your gross combined Scope 1 and 2 emissions or electricity use for the provision of network/connectivity services component of your business as an intensity metric

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
	metric tonnes CO2e	Terabyte of network traffic		N/A	

ICT2.4

Please explain how you calculated the intensity figures given in response to Question ICT2.3

ICT2.5

Do you provide carbon emissions data to your clients regarding the network/connectivity services they procure?

No

ICT2.5a

How do you provide carbon emissions data to your clients regarding the network/connectivity services they procure?

Further Information

Page: ICT3. Manufacture or assembly of hardware/components

ICT0.1c

Please identify whether "manufacture or assembly of hardware/components" comprises a significant part of your business within your reporting boundary

No

ICT3.1

Please provide a description of the parts of your business that fall under "manufacture or assembly of hardware/components"

ICT3.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the manufacture or assembly of hardware/components part of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method
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ICT3.3

Please identify the percentage of your products meeting recognized energy efficiency standards/specifications by sales weighted volume (full product range)

Product type	Standard (sleep mode)	Percentage of products meeting the standard by sales volume (sleep mode)	Standard (standby mode)	Percentage of products meeting the standard by sales volume (standby mode)	Standard (in use mode)	Percentage of products meeting the standard by sales volume (in use mode)	Comment
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ICT3.4

Of the new products released in the reporting year, please identify the percentage (as a percentage of all new products in that product type category) that meet recognized energy efficiency standards/specifications

Product type	Standard (sleep mode)	Percentage of new products meeting the standard (sleep mode)	Standard (standby mode)	Percentage of new products meeting the standard (standby mode)	Standard (in use mode)	Percentage of new products meeting the standard (in use mode)	Comment
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ICT3.5

Please describe the efforts your organization has made to improve the energy efficiency of your products

ICT3.6

Please describe the GHG emissions abatement measures you have employed specifically in your ICT manufacturing operations

ICT3.7

Do you provide carbon emissions data to your clients regarding the hardware/component products they procure?

ICT3.7a

How do you provide carbon emissions data to your clients regarding the hardware/component products they procure?

Further Information

Turkcell is a service provider, not a manufacturer or assembler of hardware/components

ICT0.1d

Please identify whether "manufacture of software" comprises a significant component of your business within your reporting boundary

No

ICT4.1

Please provide a description of the parts of your business that fall under "manufacture of software"

ICT4.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the software manufacture component of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method
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ICT4.3

Please describe your gross combined Scope 1 and 2 emissions for the software manufacture component of your business in metric tonnes CO2e per unit of production

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
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ICT4.4

What percentage of your software sales (by volume) is in an electronic format?

ICT4.5

Do you provide carbon emissions data to your clients regarding the software products they procure?

ICT4.5a

How do you provide carbon emissions data to your clients regarding the software products they procure?

Further Information

Turkcell is a service provider, not a manufacturer of software.

Page: ICT5. Business services (office based activities)

ICT0.1e

Please identify whether "business services (office based activities)" comprise a significant component of your business within your reporting boundary

No

ICT5.1

Please provide a description of the parts of your business that fall under "business services (office based activities)"

ICT5.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the business services (office based activities) component of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method
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ICT5.3

Please describe your gross combined Scope 1 and 2 emissions for the business services (office based activities) component of your business in metric tonnes per square meter

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
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ICT5.4

Please describe your electricity use for the provision of business services (office based activities) component of your business in MWh per square meter

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
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Further Information

Turkcell is a service provider, not a business service

Page: ICT6. Other activities

ICT0.1f

Please identify whether "other activities" comprise a significant component of your business within your reporting boundary

No

ICT6.1

Please provide a description of the parts of your business that fall under "other"

ICT6.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the identified other activity component of your business

Activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method
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ICT6.3

Please describe your gross combined Scope 1 and 2 emissions for your defined additional activity using an appropriate activity based intensity metric

Activity	Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
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ICT6.4

If appropriate, please describe your electricity use for your defined additional activity using an appropriate activity based intensity metric

Activity	Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
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Further Information

CDP 2014 Investor CDP 2014 Information Request