

Module: Introduction**Page: Introduction**

CC0.1**Introduction**

Please give a general description and introduction to your organization.

Turkcell is an integrated communication and technology services player in Turkey. Turkcell Group has approximately 71.5 million mobile subscribers in nine countries as of December 31, 2014. Turkcell was one of the first among the global operators to have implemented HSPA+. It has announced two new HSPA+ Technologies on its 3G network to meet rising data usage. Having successfully integrated 3C-HSDPA and DC-HSUPA Technologies, it became the first mobile operator in the world to enable peak speed of 63.3 Mbps downlink while also enabled an 11.5 Mbps uplink on a 3G network. Turkcell is the first telecom operator to offer households fiber broadband connection at speeds of up to 1,000 Mbps in Turkey. As of December 2014, Turkcell's population coverage was at 99.81% in 2G and 91.21% in 3G. Turkcell Group reported a TRY12.0 billion (US\$5.5 billion) revenue with total assets of TRY23.7 billion (US\$10.2 billion) as of December 31, 2014. It has been listed on the NYSE and the BIST since July 2000, and is the only NYSE-listed company in Turkey. Read more at www.turkcell.com.tr

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

Wed 01 Jan 2014 - Wed 31 Dec 2014

CC0.3

Country list configuration

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

Select country

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 sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire. If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net. If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see <https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

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

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

CC1.1a

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

The 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 Technology Group/Infrastructure Management Manager 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 Communication 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 has established an Energy Management Committee in 2014 which is coordinated by Technology Group/Infrastructure Management Manager. The Committee evaluates energy and GHG emissions related issues and discuss proposals for solution. Technology Group/Infrastructure Management Manager gives information to Corporate Communication Director regarding the resolutions reached by the Committee and targets for reducing Energy consumption.

CC1.2

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

Yes

CC1.2a

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

| Who is entitled to benefit from these incentives? | The type of incentives | Incentivized performance indicator | Comment |
|---|----------------------------|---|---------|
| All employees | Recognition (non-monetary) | Emissions reduction project Energy reduction project Energy reduction target Efficiency project Efficiency target | |
| Other: Network Director | Recognition (non-monetary) | Emissions reduction project Energy | |

| Who is entitled to benefit from these incentives? | The type of incentives | Incentivized performance indicator | Comment |
|---|----------------------------|---|---|
| | | reduction project Energy reduction target Efficiency project Efficiency target | |
| Corporate executive team | Recognition (non-monetary) | Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency project Efficiency target | |
| Other: Energy Committee | Monetary reward | Emissions reduction project Energy reduction project Energy reduction target Efficiency project Efficiency target | Defining energy efficiency targets, achievements and saving are scored in KPIs of committee members and relevant teams. |
| Other: CSR , Sponsorship and | Monetary reward | Emissions reduction | Awareness on sustainability, climate change, CDP reporting, involvement in Sustainability indexes are scored in KPIs of employees |

| Who is entitled to benefit from these incentives? | The type of incentives | Incentivized performance indicator | Comment |
|---|------------------------|---|--|
| NGO Relations Department | | project Emissions reduction target | |
| All employees | | Emissions reduction project Energy reduction project Efficiency project | Turkcell has initiated an internal "entrepreneurship" program -Yeni İşler" for employees in May 2014. As per the program, new business ideas developed by Turkcell employees are evaluated. Around 400 Project ideas were submitted in 2014 for 5 calls and 41 ideas qualified for 2nd stage evaluation. After evaluation of the project ideas, Turkcell provides finance and know how for further development of the Project and assist in commercialization of the Project idea. |

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 | Board or 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 modelled 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 company and assets level. The non-commercial sensitivities and 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 and 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 |
|--------------------------------------|-------------------------------------|---------|
|--------------------------------------|-------------------------------------|---------|

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

ITCs are energy dependent and energy intensive companies and they have geographically scattered stations. 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.

- Designing new Office buildings and data centers as per "green building" standards

2. Adaptation

Turkcell Business Continuity Management identifies potential threats, their impact and provides a framework for building resilience with the ability to create an effective response that safeguards the interests of key stakeholders and value-creating activities. Turkcell has established the Business Continuity Management System ("BCMS") to implement, operate, monitor, review, maintain and improve the business continuity.

Turkcell BCMS is assisted by the coordinators and business continuity virtual team. Regular BCM training and awareness programs are carried out throughout the organization. The effectiveness of BCMS is monitored every year through internal/external audits, and integrated exercises, the results of which are reviewed in management review meetings. In 2014, we exercised and tested our business continuity plans, communication and warning procedures to ensure that they are consistent with the business continuity objectives.

Turkcell's BCM will be able to cover the majority of Turkcell's operations through potential environmental events and natural disasters. They are regularly exercised to guarantee the operation of time-sensitive business activities in case of business disruptions.

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

CC2.2c

Does your company use an internal price of carbon?

No, and we currently don't anticipate doing so in the next 2 years

CC2.2d

Please provide details and examples of how your company uses an internal price of carbon

CC2.3

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

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

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 closely 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 Coordination Board on Climate Change and Air Management 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. | İDKK (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. |
| Other: Dissemination of M2M solutions | Support | In order to remove barriers for dissemination of M2M services, through Mobilsiad, Mobisad, Tüted, Teder and TBV, Turkcell is in contact with The Ministry of Transport, Maritime Affairs and Communication to remove the fee for wireless license. | In order to decrease import of smart devices and encourage local smart device and sim cards and disseminate broadband internet network, fee for KA band devices should be cancelled. This will increase the number of users, efficiency and avoid foreign trade loss. |

CC2.3b

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

Yes

CC2.3c

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

| Trade association | Is your position on climate change consistent with theirs? | Please explain the trade association's position | How have you, or are you attempting to, influence the position? |
|----------------------------------|--|---|--|
| Informatics Industry Association | Consistent | TUBISAD has more than 200 members governing a volume of 40 billion USD. TUBISAD is supporting environment-friendly Technologies and working for developing regulations and policies for a healthy, competitive and sustainable ICT market in Turkey | Turkcell is a board member in TUBISAD and able to influence the decisions and actions taken by TUBISAD. |
| GSMA | Consistent | The GSMA is collaborating with the European Commission and the International Telecommunication Union (ITU) on standardisation, including methodologies to assess environmental impact. The Mobile Energy Efficiency GSMA acknowledges role of ICT in managing GHG emissions and collaborates with its members, international agencies (EU, IFC, WB, international telecommunication unit etc) to develop methodology and tools for emission reduction via ICT applications. | Turkcell is supporting GSMA efforts and providing communication on progress in line with GSMA's objectives for reducing emissions and providing solutions . Turkcell has prepared a video for GSMA to disclose the efforts for Energy efficiency and emission reduction. video is available at https://www.youtube.com/watch?v=9dA4IN-FeIU |

CC2.3d

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

Yes

CC2.3e

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

Yes

CC2.3f

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

As Turkcell, we do not limit our collaboration with universities to joint projects; we also organize undergraduate courses at various universities and participate pre competitive research projects. Turkcell supports master's and PhD studies with scholarships granted through the Informatics Association of Turkey. Turkcell's R&D arm "Turkcell Technology" which has many R&D projects with private companies, research institutions or universities. List of projects and partners are available at <http://www.turkcellteknoloji.com.tr/rd-programs/>

A recent Turkcell has been involved as a " University-Private sector" Project implemented with Middle East Technical University and has been master thesis for a graduate student. Project was about "Development of Energy generator using low frequency vibrations and radiowaves". An electromagnetic generator increasing the battery life 10 times has been designed and developed within the scope of the Project. Project has been supported by the Ministry of Science, Industry and Technology. (<http://muh.metu.edu.tr/page.php?url=santez-projects>). Results of the studies are also published as articles in journals and presented in international conferences.

Turkcell R&D center is one of the largest centers in Turkey with over 700 full-time researchers. By developing services and products for network services and providers, Turkcell have become one of the leading R&D bases in Turkey in the area of telecommunications. Reducing emission and Energy intensity is crucial for competitiveness of Turkcell activities. Therefore, supporting emission&energy reduction projects are in line with Turkcell's core strategy.

CC2.3g

Please provide details of the other engagement activities that you undertake

Turkcell supports or involved in many NGOs, networks or stakeholders. Turkcell is developing projects, sponsoring events or publishing reports in collaboration with those stakeholders. Full list is available at <http://www.turkcell.com.tr/tr/hakkimizda/sosyal-sorumluluk/stk-iliskileri/uyeliklerimiz>

Turkcell also supports and is represented in UN SDSN (sustainable development solutions network). <http://unsdsn.org/about-us/leadership-council/> at Director level.

Turkcell also actively participates in the events (conferences, seminars etc) and shares the experience in Turkcell for Energy saving and emission reduction which may serve as an example for the sector. In 2014, Turkcell staff has participated in a conference on Telco Energy & Infrastructure efficiency conference and has

made a presentation on Implementing Energy Efficiency Solutions and Management Tools in a Mobile Network.

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 a corporate Climate Strategy Outline to define its overall climate change strategy and how it is integrated to its corporate risk management. Both Corporate Communication Director and Energy and Technology Group/Infrastructure Management Manager are responsible with maintaining the consistency of all Turkcell activities with the climate strategy outline paper. Both directors review the climate strategy together with Turkcell activities and projects before assuring the consistency.

CC2.3i

Please explain why you do not engage with policy makers

CC2.4

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

Yes

CC2.4a

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

We, at Turkcell, take steps to reduce our environmental impacts arising out of our own activities. While including saving-providing implementations in our business processes by using the capabilities of our technology, we work for the development of services with environmental awareness for our customers. By protecting our existing natural capital, we act with the awareness of our responsibility for the future generations. In this context, we make efforts to increase every year the use of

renewable energy sources, and focus on process optimization activities for energy efficiency. We work for the management of natural resources with appropriate strategies by protecting the balance between economy and ecosystem in an environment-friendly way. While realizing the applications required for reducing waste generation and for waste sorting at the source, we care for controlled waste disposal.

Our Environmental Management Policy which covers our processes for environmental protection is in the control of our Top Management.

Turkcell is spending effort to reduce emissions both through its own Operations and also through solutions offered to clients such as M2M, fleet monitoring or other smart solutions which enable effective Energy Management & Low Carbon Emission Applications.

Further Information

Page: CC3. Targets and Initiatives

CC3.1

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

Absolute target

CC3.1a

Please provide details of your absolute target

| ID | Scope | % of emissions in scope | % reduction from base year | Base year | Base year emissions (metric tonnes CO2e) | Target year | Comment |
|------|---------|-------------------------|----------------------------|-----------|--|-------------|--|
| Abs1 | Scope 2 | 82% | 3.6% | 2013 | 198694 | 2014 | Using power saving algorithms in base stations, free cooling, inverter replacements, modifications of air conditioning systems, PV installations and using high efficiency rectifiers. |
| Abs2 | Scope 2 | 3.6% | 1.3% | 2013 | 8780 | | Using LED lighting in Diyarbakır and Tepebaşı building, around 250000kWh electricity saving has been achieved. |

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 |
|----|-------|-------------------------|----------------------------|--------|-----------|--------------------------------|-------------|---------|
| | | | | | | | | |

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 |
|------|-------------------|------------------------|--|
| Abs1 | 100% | 100% | Energy and GHG saving achieved in 2014 has been beyond the targets defined for 2014. Saving in 2014 is estimated at around 5%. This is mainly due to increase in number of base stations which have been equipped with low energy installations. |
| Abs2 | 100% | 100% | Installation of LED has been completed. Turkcell has initiated studies to reduce the energy & emissions from office buildings. New office buildings and data centers (under construction) will have LEED certificate and lower energy consumption. |

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

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

Turkcell offers innovative solutions for its clients for increasing saving and efficiency of their processes. 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. M2M services offered by Turkcell include Smart Device, Mobile POS ,Team Mobile , Smart Energy , Smart House, Smart Industry. So far, under Turkcell's Corporate Win Program, we have provided \$ 13.6 million to our customers and have helped those brands with whom we collaborate to grow in turnover by \$ 164 million. During 2014 Turkcell has reached 1.5 million M2M customers.

Through our M2M solutions, we transformed more than 530,000 vehicles into "Smart Vehicles" by using our M2M infrastructure, providing Turkey with an annual fuel saving of more than \$450 million . Some of the applications of M2M solutions include;

-The Turkcell Energy Monitoring Service facilitates monitoring of the energy consumption of customers' offices, premises or chain stores, enabling our corporate customers achieve genuine energy savings. Our Smart Machine Management Solution has made possible the remote operation of any type of machine.

-Our Smart Reactive Management Service, meanwhile, has resulted in corporate customers reducing their energy bills by up to 30%.

-We undertook the tracking of temperature changes at 10,000 vaccination centers operated by the Ministry of Health's Public Health Agency.

-We continue to focus on a number of M2M meter reading projects. To date, we have increased the number of remotely read meters, owned by twentyone

distribution companies, to more than 110,000.

-We increased corporate customers' use of our environmentally friendly bills, reaching an 80% adoption rate. This effort saved 6,500 trees in one year.

CC3.3

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

Yes

CC3.3a

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

| Stage of development | Number of projects | Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *) |
|---------------------------|--------------------|--|
| Under investigation | 12 | 6000 |
| To be implemented* | | |
| Implementation commenced* | | |
| Implemented* | 13 | 7458 |
| 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) | Scope | Voluntary/ Mandatory | Annual monetary savings (unit currency - as specified in CC0.4) | Investment required (unit currency - as specified in CC0.4) | Payback period | Estimated lifetime of the initiative | Comment |
|------------------------------|--|--|--------------------|----------------------|---|---|----------------|--------------------------------------|--|
| Energy efficiency: Processes | Modernisation of air conditioning systems, use of inverter type air conditioners | 1005 | Scope 2 | Voluntary | 300000 | 2000000 | 4-10 years | 6-10 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |
| Energy efficiency: Processes | Installation of Free cooling systems in base stations | 128 | Scope 2 Scope 3 | Voluntary | 40000 | 1500000 | 4-10 years | 11-15 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |
| Energy efficiency: Processes | Removal of Excess (Unnecessary) Rectifier Units | 565 | Scope 2 Scope 3 | Voluntary | 150000 | 30000 | <1 year | 6-10 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |
| Energy efficiency: Processes | Removal of Excess (Unnecessary) Converter Units | 102 | Scope 2 Scope 3 | Voluntary | 30000 | 25000 | <1 year | 6-10 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |
| Energy efficiency: Processes | Using Power Saving Algorithms | 3837 | Scope 2 Scope | Voluntary | 1000000 | 2000000 | <1 year | 6-10 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope |

| Activity type | Description of activity | Estimated annual CO2e savings (metric tonnes CO2e) | Scope | Voluntary/ Mandatory | Annual monetary savings (unit currency - as specified in CC0.4) | Investment required (unit currency - as specified in CC0.4) | Payback period | Estimated lifetime of the initiative | Comment |
|--------------------------------------|--|--|--------------------|----------------------|---|---|----------------|--------------------------------------|--|
| | | | 3 | | | | | | 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |
| Energy efficiency: Processes | Changing Cabinet types | 1294 | Scope 2 Scope 3 | | 350000 | 2600000 | <1 year | 6-10 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |
| Low carbon energy installation | Installation of PV systems | 2 | Scope 2 Scope 3 | Voluntary | 635 | 87000 | 11-15 years | 21-30 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |
| Energy efficiency: Building services | LED lighting in Diyarbakır and Tepebaşı buildings, chiller replacement in Adana facilities | 209 | Scope 2 Scope 3 | Voluntary | 60000 | 240000 | >25 years | 6-10 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |
| Product design | Use of outdoor cabinets for saving air conditioning demand | 28 | Scope 2 Scope 3 | Voluntary | 8000 | 600000 | <1 year | 11-15 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |

| Activity type | Description of activity | Estimated annual CO2e savings (metric tonnes CO2e) | Scope | Voluntary/ Mandatory | Annual monetary savings (unit currency - as specified in CC0.4) | Investment required (unit currency - as specified in CC0.4) | Payback period | Estimated lifetime of the initiative | Comment |
|------------------------------|--|--|--------------------|----------------------|---|---|----------------|--------------------------------------|--|
| | | | | | | | | | table. |
| Energy efficiency: Processes | Installation of high efficiency rectifiers | 117 | Scope 2 Scope 3 | Voluntary | 40000 | 150000 | >25 years | 11-15 years | Payback periods based on returns in 2014. Activities enabling CO2 saving Scope 2 also reduces Scope 3 Emissions however, those were not quantified in the table. |

CC3.3c

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

| Method | Comment |
|--|--|
| Dedicated budget for energy efficiency | Turkcell has established Energy Committee in 2014. One of the responsibilities of the committee is reviewing the Energy consumption & efficiency plans. Within this scope, investment needs, returns and cost benefit analysis are made and submitted to management for approval. Dedicated budgets are reserved for approved investments. Turkcell energy efficiency initiatives throughout 2014 saved 15.9 million kWh (equivalent to the annual energy consumption of 5,900 households), demonstrating our respect for the environment. Furthermore, we have increased the number of base stations powered by renewable energy. Moreover, we have installed energy measurement systems to monitor our energy consumption. We have built a system to monitor our energy consumption; carry out energy efficiency studies and make improvements where necessary. The system has received ISO50001 (Energy Management System) certification, and Turkcell remains the industry leader in this regard |

CC3.3d

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

Further Information

Page: CC4. Communication

CC4.1

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

| Publication | Status | Page/Section reference | Attach the document |
|---|----------|------------------------|---|
| In mainstream financial reports in accordance with the CDSB Framework | Complete | 66 | https://www.cdp.net/sites/2015/45/21145/Climate Change 2015/Shared Documents/Attachments/CC4.1/Turkcell-AR-2014-ENG.pdf |
| In voluntary communications | Complete | 88, 93, 94 | https://www.cdp.net/sites/2015/45/21145/Climate Change 2015/Shared Documents/Attachments/CC4.1/turkcell-sustainability-report-2012-13-en.pdf |
| In voluntary communications | Complete | 1,2 | https://www.cdp.net/sites/2015/45/21145/Climate Change 2015/Shared Documents/Attachments/CC4.1/TURKCELL_sustainability communication.xls |

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

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

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

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|-----------------------|---|----------------------------|--------------|-------------------------|-------------|---------------------|---|---|--|
| Cap and trade schemes | Turkey has signed the agreement for Partnership for Market Readiness (PMR) and the Project implementation has started. The Project Development Objective (PDO) of the Partnership for Market Readiness Project (PMR Project) Implementation Phase is to assist Turkey implement a | Increased operational cost | 3 to 6 years | Indirect (Supply chain) | Very likely | Low-medium | Electricity is major input and cost item for operation of base stations and data centers. Around 15% of operational costs are due to Energy consumption. Implementation of cap and trade schemes may increase cost of utility companies and thus cost of purchased electricity from | Turkcell is implementing projects to reduce energy and emission intensity from all Operations. Those efforts include; - Improving cooling performance of equipment & natural cooling techniques -Using more Energy efficient equipment in | 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 |
|--|--|------------------------|--------------|------------------|----------------------|---------------------|---|---|--|
| | greenhouse gas Monitoring, Reporting, and Verification (MRV) pilot in the electricity sector, based on Turkey's MRV regulation, and to provide analytical information for the establishment of a carbon market in Turkey. | | | | | | suppliers. | base stations & data centers - Designing new Office & data centers as per green building (LEED etc.) standards - Installing solar & wind powered energy generation in base stations | |
| Uncertainty surrounding new regulation | If Turkey joins the EU, it will implement the EU's Emission Trading Scheme (EU-ETS) directive as a part of its <i>acquis communautaire</i> . According to the current schedule of the <i>acquis</i> , Turkey would need to transpose the EU ETS directive to Turkish law by 2019. However, since there is no regulation or a roadmap for Carbon pricing, taxation or | Increased capital cost | 3 to 6 years | Direct | More likely than not | Low-medium | Uncertainty and delay in action may cost increase in demand for financing new investments and cost of compliance. | Regulations which may affect Turkcell Operations directly or indirectly are monitored. Strategies are developed for various scenarios. | Increasing R&D expenses and energy investment . Cost for current scenario is around \$100K for monitoring and compliance with regulations. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|-----------------------------------|---|----------------------------|--------------|------------------|------------|---------------------|--|---|---|
| | renewable energy certificates & pricing, investment strategy for energy efficiency & use of renewables in operations is hampered. | | | | | | | | |
| 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 | Likely | Low-medium | 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%. |

CC5.1b

Please describe your inherent 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 mean (average) temperature | Turkcell has base stations in all around Turkey. Climate change scenarios Show an increasing trend for mean temperature coupled with increased/reduced precipitation in different regions. Higher mean temperatures result in higher cooling demand and costs. Problems may occur in Data Center feeding equipment/systems. These might be potential damage to network equipment and increased power to cool network equipment and result in reduced performance or disruption of the service. As a conclusion, it may require replacement of equipment with | Increased capital cost | 1 to 3 years | Direct | Very likely | Medium-high | Around 16% of energy consumption in base stations is due to cooling equipment. New higher capacity equipment investments will be needed to provide continuity of the services. This will increase both capital and operational costs. | Investing in new technology for design of base stations, data centers considering future climate projections | Equipment investments increase by 10 to 20%. |

| Risk driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|--------------|-----------------|-------------|---------------------|---|---|--|
| | higher cooling capacity systems. | | | | | | | | |
| Change in precipitation extremes and droughts | Potential damage to network equipment and property from flooding or landslide due to increased precipitation intensity. Flooding will also affect access to sites for maintenance & repair of the equipment. | Reduction/disruption in production capacity | 1 to 3 years | Direct | Very likely | Medium-high | Increased cost due to flood prevention&resiliency measures in Critical infrastructure of the company. | Assessment of vulnerabilities of the Critical assets considering the climate related risks. | Related investments increase by 10 to 20%. |
| Change in temperature extremes | Fluctuations in temperatures make it difficult to predict energy needs for the year. Extreme temperatures and heat waves will create conditions beyond the design parameters of the system. As a result, this will cause performance loss or failure in quality of the services | Reduced demand for goods/services | 3 to 6 years | Direct | Likely | Medium-high | Cost of improving resiliency will increase due to increased investment and operational costs. | Investing in new technology&infrastructure for monitoring the system performance, analyzing hazard risks and early warning. | Related investments increase by 10 to 20%. |

| Risk driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|-------------|-------------|------------------|-----------|-----------------|------------|---------------------|----------------------------------|-------------------|--------------------|
| | provided. | | | | | | | | |

CC5.1c

Please describe your inherent 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 | ICT is one of the fastest growing sectors and Carbon footprint of ICT services and products are increasing in parallel. Consumer awareness about environmental impact of services and products used is increasing and demand is shifting to greener and low Carbon services and products. If Turkcell can not respond the demand from its clients for greener and low carbon services, it can cause | Reduced demand for goods/services | 1 to 3 years | Direct | Likely | Low-medium | Changing consumer demand for Turkcell services and decreasing revenues. | Increasing climate centered public communication and disclosing information on Turkcell's performance on GHG reduction. Developing innovative services (M2M or remote reading etc) to respond demand and avoid emissions. | Increasing corporate communication costs by 2% |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|-------------|--|------------------|-----------|------------------|------------|---------------------|----------------------------------|-------------------|--------------------|
| | reputation loss and decrease demand for Turkcell services. | | | | | | | | |

CC5.1d

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

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

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

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

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|--------------------------|--|--------------------------------|--------------|-----------------|-------------------|---------------------|---|---|---|
| International agreements | Global GHG emissions are increasing however, ICT provides a significant potential for emission reduction. GeSI Smarter 2020 report demonstrates how the increased use of information | New products/business services | 3 to 6 years | Direct | Virtually certain | Medium-high | Increasing revenue and product diversity due to new and value added services. | Dissemination of M2M services and developing new solutions for other sectors. | Cost of R&D staff engaged in developing relevant solutions. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|--------------------|---|------------------|-----------|-----------------|------------|---------------------|----------------------------------|-------------------|--------------------|
| | <p>and communication technology (ICT) such as video conferencing and smart building management could cut the projected 2020 global greenhouse gas (GHG) emissions by 16.5%, amounting to \$1.9 trillion in gross energy and fuel savings and a reduction of 9.1 Gigatonnes carbon dioxide equivalent (GtCO₂e) of greenhouse gases. Turkcell provides machine to machine(M2M) solutions in many sectors including smart meter remote reading, fleet</p> | | | | | | | | |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|----------------------|--|---------------------------|--------------|-----------------|-------------|---------------------|---|--|-----------------------------|
| | monitoring solutions, remote temperature control systems for transport services, diesel generator monitoring systems which help save Energy and reduce emissions. | | | | | | | | |
| Voluntary agreements | Turkcell is spending effort to reduce GHG emissions and thus Energy consumption. Reduced emissions in many cases correspond to reduced energy consumption and dependency on energy sources. Voluntary reporting initiatives, commitments and targets help in | Reduced operational costs | 1 to 3 years | Direct | Very likely | Medium-high | Reduced operational costs due to improved efficiency of the equipment used and services provided. Energy committee has been established within Turkcell to identify saving potentials, implement and monitor the results of the improvements. | Better monitoring of Energy consumption for facilities , equipment and vehicles. Collaboration with research institutions for ensuring environmental performance of equipment purchased. | Negligible additional cost. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|-----------------------------------|---|-----------------------------|--------------|-----------------|-------------------|---------------------|---|---|--------------------|
| | increasing the efficiency and saving operational costs. | | | | | | | | |
| 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. Turkcell is collaborating with all of the electricity distribution companies in Turkey and offering smart meter solutions. By 2014, Turkcell has around 150000 smart meters corresponding to 75% of the market. Together with other M2M solutions, | Premium price opportunities | Up to 1 year | Direct | Virtually certain | Medium-high | Increasing revenue and penetration to new sectors and implementation areas. | Dissemination of M2M services and developing new solutions for other sectors. | Negligible |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|--------------------|---|------------------|-----------|-----------------|------------|---------------------|----------------------------------|-------------------|--------------------|
| | Turkcell enables connection between 1.6 million machines and contributes more than \$ 900 million saving in 2014. | | | | | | | | |

CC6.1b

Please describe the inherent 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 | Increased demand for existing products/services | 3 to 6 years | Direct | Likely | Low | Increasing capital investment, reduced operational costs | Site assessments are made considering the reliability of the electricity grid, wind potential and solar potentials. Cost of disruption in services is also considered as a loss. | Process is managed by Energy team of Turkcell. Investment costs and returns are assessed by financial team. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|--------------|------------------|-------------|---------------------|--|---|---|
| | up solar and wind power-operated communication units. | | | | | | | | |
| 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" | Increased demand for existing products/services | Up to 1 year | Direct | Very likely | Low-medium | Increasing revenue due to use of new services. | Increasing market penetration of the services and awareness about the services provided. | Negligible additional cost. |
| 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 | Reduced operational costs | Up to 1 year | Direct | Very likely | | Increasing revenue | Site assessments are made considering the reliability of the electricity grid, weather conditions and performance of the equipments used in the | Process is managed by Energy team of Turkcell. Investment costs and returns are assessed by financial team. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|--------------------|--------------------|------------------|-----------|------------------|------------|---------------------|----------------------------------|-------------------|--------------------|
| | cooling equipment. | | | | | | | facilities. | |

CC6.1c

Please describe the inherent 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 environment and climate change. | Increased demand for existing products/services | Up to 1 year | Direct | Very likely | Medium | Increasing revenue | Turkcell is reducing GHG emissions due to improvements in processes, equipments and facilities. In addition Turkcell is also providing solutions which avoids GHG emissions. For communication with the clients and stakeholders, Turkcell will be disclosing more detailed information on the climate mitigation efforts in company reports and bulletins. | Negligible |
| Changing consumer | Level of environmental | Increased demand for | Up to 1 year | Direct | Very likely | Medium | Increasing revenue | Assessing the needs of the clients | Negligible |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|--------------------|---|---|--------------|------------------|-------------------|---------------------|----------------------------------|---|--------------------|
| behaviour | 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 . | existing products/services | | | | | | and developing new products for individual and institutional clients. | |
| 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 inherent 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 inherent 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 inherent 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)

| Scope | Base year | Base year emissions (metric tonnes CO2e) |
|---------|-----------------------------------|--|
| Scope 1 | Tue 01 Jan 2013 - Sun 01 Dec 2013 | 8391 |
| Scope 2 | Tue 01 Jan 2013 - Sun 01 Dec 2013 | 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 |
|---|
| The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition) |
| IPCC Guidelines for National Greenhouse Gas Inventories, 2006 |
| ISO 14064-1 |
| US EPA Climate Leaders: Direct HFC and PFC Emissions from Use of Refrigeration and Air Conditioning Equipment |
| 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

GHG Protocol- GHG Emissions from Transport or Mobile Sources Tool Version 2.6
2012 Guidelines to DEFRA for DECC's GHG Conversion Factors for Company Reporting- EFs were used for Calculation of Waste 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 | Other: EPA: GWPs and Ozone Depletion Potentials of Some Ozone-Depleting Substances and Alternatives Listed by the SNAP Program |

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 |
|----------------------|-----------------|----------------------------|--|
| Diesel/Gas oil | 0.0741 | metric tonnes CO2 per GJ | IPCC 2006 Chapter 2 Table 2.4 |
| Electricity | 0.4720 | metric tonnes CO2e per MWh | IEA (2012). CO2 Emissions from Fuel Combustion, 2013 Edition, Highlights. International Energy Agency Emission Factor for Turkey |
| Motor gasoline | 0.0693 | metric tonnes CO2 per GJ | IPCC 2006 Chapter 2 Table 2.4 |

| Fuel/Material/Energy | Emission Factor | Unit | Reference |
|----------------------|-----------------|--------------------------|-------------------------------|
| Natural gas | 0.0561 | metric tonnes CO2 per GJ | IPCC 2006 Chapter 2 Table 2.4 |

Further Information

Attachments

[https://www.cdp.net/sites/2015/45/21145/Climate Change 2015/Shared Documents/Attachments/ClimateChange2015/CC7.EmissionsMethodology/Turkcell_CarbonFootprint_summarytablev03.xlsx](https://www.cdp.net/sites/2015/45/21145/Climate%20Change%202015/Shared%20Documents/Attachments/ClimateChange2015/CC7.EmissionsMethodology/Turkcell_CarbonFootprint_summarytablev03.xlsx)

Page: CC8. Emissions Data - (1 Jan 2014 - 31 Dec 2014)

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

13471

CC8.3

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

276612

CC8.4

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

Yes

CC8.4a

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

| Source | Relevance of Scope 1 emissions from this source | Relevance of Scope 2 emissions excluded from this source | Explain why the source is excluded |
|---------------------------------------|---|--|--|
| Some of the TT and TRT base stations. | Emissions are relevant but not yet calculated | Emissions are relevant but not yet calculated | These sites are operated in cooperation with Turk Telecom and Turkish Radio and Television (approximately 0.3% of total sites), there are no electricity meters and site records that are available to Turkcell. Turkcell will strive to include diesel generator fuel consumption under Scope 1 and electricity consumption under Scope 2 for future reporting periods. |

CC8.5

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

| Scope | Uncertainty range | Main sources of uncertainty | Please expand on the uncertainty in your data |
|---------|---|--|--|
| Scope 1 | More than 2% but less than or equal to 5% | Data Gaps Assumptions Metering/ Measurement Constraints Data Management | Turkcell operates in several locations including remote places. Different types of invoicing procedures are applied in different locations. Even though more than 90% of Turkcell locations can be monitored online some data gaps and assumptions were faced during the calculations. |
| Scope 2 | More than 2% but less than or equal to 5% | Data Gaps Assumptions Metering/ Measurement Constraints Data Management | Turkcell operates in several locations including remote places. Different types of invoicing procedures are applied in different locations. Even though more than 90% of Turkcell locations can be monitored online some data gaps and assumptions were faced during the calculations. |

CC8.6

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

Third party verification or assurance complete

CC8.6a

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

| Type of verification or assurance | Attach the statement | Page/section reference | Relevant standard | Proportion of reported Scope 1 emissions verified (%) |
|-----------------------------------|---|------------------------|-------------------|---|
| Reasonable assurance | https://www.cdp.net/sites/2015/45/21145/Climate Change 2015/Shared Documents/Attachments/CC8.6a/Turkcell_CDP statement_docx.pdf | Page 1 Section 2 | ISO14064-3 | 100 |

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

Third party verification or assurance complete

CC8.7a

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

| Type of verification or assurance | Attach the statement | Page/Section reference | Relevant standard | Proportion of reported Scope 2 emissions verified (%) |
|-----------------------------------|---|------------------------|-------------------|---|
| Reasonable assurance | https://www.cdp.net/sites/2015/45/21145/Climate Change 2015/Shared Documents/Attachments/CC8.7a/Turkcell_CDP statement_docx.pdf | Page 1 Section 2 | ISO14064-3 | 100 |

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

| 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

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 | 4049 |
| Headquarters' Buildings | 9422 |

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 | 10420 |
| CH4 | 26 |
| N2O | 256 |
| HFCs | 2769 |

CC9.2d

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

| Activity | Scope 1 emissions (metric tonnes CO2e) |
|---|--|
| Natural Gas Combustion (Space Heating) | 1458 |
| Diesel Combustion (Stationary) | 725 |
| Diesel Combustion (Base Stations) | 4049 |
| Diesel Combustion (On-road vehicles) | 4465 |
| Petroleum Combustion (On-road vehicles) | 5 |
| Fugitive Emissions | 2769 |

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

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2014 - 31 Dec 2014)

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 in CC8.3 (MWh) |
|----------------|----------------------------|--|--|
|----------------|----------------------------|--|--|

CC10.2

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

By business division
By activity

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 | 214955 |
| Headquarters' Buildings | 61657 |

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) |
|--|--|
| Electricity consumption in Base Stations | 214955 |
| Electricity consumption in Data Centers | 13839 |
| Electricity consumption in NDC Rooms | 22316 |
| Electricity Consumption in offices | 25504 |

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

CC11.1

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

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

CC11.2

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

| Energy type | MWh |
|-------------|---------|
| Fuel | 40800.8 |
| Electricity | 586042 |
| Heat | 0 |
| Steam | 0 |
| Cooling | 0 |

CC11.3

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

| Fuels | MWh |
|----------------|----------|
| Diesel/Gas oil | 33597.22 |
| Motor gasoline | 11.39 |

| Fuels | MWh |
|-------------|---------|
| Natural gas | 7192.19 |

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 | 311.07 | As of 2014, 26 sites in Turkcell's network operate with renewable energy or hybrid (grid+renewable) systems |

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?

Increased

CC12.1a

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

| Reason | Emissions value (percentage) | Direction of change | Comment |
|---|------------------------------|---------------------|--|
| Emissions reduction activities | 2.9 | Decrease | In 2014 Energy efficiency and emission reduction activities have resulted in total energy savings of 15.9 million kWh. |
| Divestment | | | |
| Acquisitions | | | |
| Mergers | | | |
| Change in output | | | |
| Change in methodology | 15.5 | Increase | There have been several changes in methodology compared to the base year. These changes include the updated grid electricity emission factor from the same source and scope extensions which were not taken into account last year. For 2014, GHG Inventory has been created in line with ISO14064-I requirements and verified as well. Baseline re-calculation could not be carried out due to data gaps from 2013. |
| Change in boundary | | | |
| Change in physical operating conditions | | | |
| Unidentified | | | |
| Other | | | |

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 |
|------------------|------------------|--------------------|-----------------------------|--|--|
| 0.000053 | metric | unit total | 12 | Increase | Though the revenue has increased 6% in TRY basis, due to wider range of emission |

| Intensity figure | Metric numerator | Metric denominator | % change from previous year | Direction of change from previous year | Reason for change |
|------------------|------------------|--------------------|-----------------------------|--|---|
| | tonnes CO2e | revenue | | | sources covered in 2014 compared to previous year, change in emission factor and change in consumption due to organic growth. Emission reduction activities have contributed to help reduce the intensity figures, due changes in revenues overall intensity figure remained close. |

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 |
|------------------|--------------------|--------------------|-----------------------------|--|--|
| 87.4 | metric tonnes CO2e | FTE employee | 28.4 | Increase | Scope 1 and Scope 2 emissions are given more in detail for 2014, |

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 |
|------------------|--------------------|--------------------------|-----------------------------|--|--|
| 0.0838 | metric tonnes CO2e | Other: Total Subscribers | 2 | Increase | Total number of subscribers has changed %1.7 compared to last year. Also, emission factor used in reporting year and change in emission sources covered has led to increase in intensity figure. |

Further Information

Page: CC13. Emissions Trading

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 data obtained from suppliers or value chain partners | Explanation |
|---|------------------------------|--------------------|--|---|---|
| Purchased goods and services | Relevant, not yet calculated | | | | Turkcell subcontracts another company for maintenance of base stations. Due to data management protocols these information could not be acquired. However the company is encouraged and informed about next years' reporting. |
| Capital goods | Relevant, not yet calculated | | | | Turkcell facilitates a number of technologies and hardware. Innovation is the core of the company therefore there is a continuous upgrade system for keeping up with advanced technologies. These emissions will be taken into account in the next reporting years. |
| Fuel-and-energy-related activities (not included in Scope 1 or 2) | Relevant, calculated | 45220 | IPCC Methodology for electricity losses and 2013 Government GHG Conversion Factors for Company Reporting: Methodology Paper for Emission Factors July 2013 , DEFRA | 100.00% | Turkcell makes use of several types of fuels for heating and transportation. Upstream emissions from these fuels and electricity transmission losses are taken into account. |
| Upstream transportation and distribution | Relevant, calculated | 1404 | GHG Protocol: "GHG emissions from transport or mobile sources" Tool v2.6 | 100.00% | Turkcell subcontracts another company for upstream transportation of equipment and other goods. Fuel consumption data along with logistic routes are acquired from the company, data is incorporated into GHG tool and crosschecked against fuel consumptions before submission for verification. |
| Waste generated in operations | Relevant, calculated | 111 | 2012 Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting | 100.00% | Turkcell operations require regular upgrades and replacements of broken and out dated equipments. These equipment parts along with other types of wastes are categorized into twenty groups and emissions resulting from waste generation is calculated. |
| Business travel | Relevant, calculated | 1156 | GHG Protocol: "GHG emissions from transport or mobile sources" Tool v2.6 | 100.00% | Turkcell keeps track of all employee flights via an integrated online module. Flight records in the database is crosschecked against ticket invoices |

| Sources of Scope 3 emissions | Evaluation status | metric tonnes CO2e | Emissions calculation methodology | Percentage of emissions calculated using data obtained from suppliers or value chain partners | Explanation |
|--|------------------------------------|--------------------|--|---|---|
| | | | | | collected from four partner agencies before submission for verification. Emissions from road travels are included in scope 1 as Turkcell uses long term leased fleets. |
| Employee commuting | Relevant, calculated | 10503 | GHG Protocol: "GHG emissions from transport or mobile sources" Tool v2.6 | 100.00% | Daily commuting activities is carried out by a third party company commissioned by Turkcell. Fuel consumption data together with the daily checkpoints are acquired from the company and incorporated into the GHG Protocol transport tool. Fuel consumption data is also crosschecked during verification. |
| Upstream leased assets | Not relevant, explanation provided | | N/A | | Turkcell operates leased assets in several locations. These assets are considered under scope 1 emissions as the operational control belongs to Turkcell. |
| Downstream transportation and distribution | Relevant, not yet calculated | | N/A | | Turkcell smart devices are manufactured by a third party company on behalf of Turkcell. Transportation of these goods are accomplished via courier services. No specific data could be reached for these activities. |
| Processing of sold products | Not relevant, explanation provided | | N/a | | There is no intermediary product sold by Turkcell which is processed. |
| Use of sold products | Relevant, calculated | 828 | IPCC Methodology for energy related activities | 100.00% | Turkcell has sold approximately 552,000 units of smart devices in 2014. Emissions are calculated assuming the devices are re-charged once per day and they were all used 365days in the reporting year. |
| End of life treatment of sold products | Relevant, not yet calculated | | | | Turkcell encourages campaigns and promotes collection of outdated devices and electronic wastes for reuse. Due to data quality these emissions are not calculated. |
| Downstream leased assets | Not relevant, explanation provided | | | | There are no downstream leased assets for Turkcell. |

| Sources of Scope 3 emissions | Evaluation status | metric tonnes CO2e | Emissions calculation methodology | Percentage of emissions calculated using data obtained from suppliers or value chain partners | Explanation |
|------------------------------|------------------------------------|--------------------|-----------------------------------|---|--|
| Franchises | Not relevant, explanation provided | | | | Turkcell vendors do not operate in the form of franchises. Each vendor is a separate company. |
| Investments | Not relevant, explanation provided | | | | Turkcell İletişim A.Ş. operates in Turkey and reports within boundaries of Turkey. There are no domestic investments for Turkcell. |
| Other (upstream) | | | | | |
| Other (downstream) | | | | | |

CC14.2

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

Third party verification or assurance complete

CC14.2a

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

| Type of verification or assurance | Attach the statement | Page/Section reference | Relevant standard | Proportion of Scope 3 emissions verified (%) |
|-----------------------------------|---|------------------------|-------------------|--|
| Reasonable assurance | https://www.cdp.net/sites/2015/45/21145/Climate Change 2015/Shared Documents/Attachments/CC14.2a/Turkcell_CDP statement_docx.pdf | Page 1 Section 2 | ISO14064-3 | 98 |

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 |
|------------------------------|-------------------|------------------------------|---------------------|---------|
| | | | | |

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

Turkcell as a regional leader GSM service provider, continuously strives for more energy efficient technologies and products. By the end of 2014 Turkcell has reached 1.5 Million M2M(MachineToMachine) subscribers who enjoyed the advantages of remote managing and monitoring of their businesses. Thanks to the stable network infrastructure that Turkcell offers to its customers thousands of vehicles were transformed into "smart vehicles" and an annual fuel saving worth approximately \$500k has been achieved in 2014. Number of meters that can be read remotely has been reached over 110,000 and next gen energy efficient cash register users have reached to 50,000 in 2014.

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 |
|---------------------|------------------|---------|
|---------------------|------------------|---------|

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 |
|---------------------|---|----------------------------|
| Filiz Karagül Tüzün | Turkcell Group Corporate Communication Director | Other: Director |

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 9 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 | | 13839 | 29318 | 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 ICT hardware sits in data centers where Power Usage Effectiveness (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)

Average

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 |
|------------------------|-------------|-----------------------------|---------------------|--|
| 9 | 1.7 | 0 | No change | PUE Range is between 1.03 and 1.99 depending of data center. |

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 |
|-----------------------|-----------|-----------------------------|---------------------|---------|
|-----------------------|-----------|-----------------------------|---------------------|---------|

ICT1.5

Please provide details of how you have calculated your PUE value

Green Grid, or Total Facility Power divided by IT Equipment Power

ICT1.6

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

Yes

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)

Data Center Infrastructure Efficiency (DCiE) is also used together with PUE. DCiE average for Turkcell is higher than 60%.

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 | Air conditioning systems in data centers have been replaced. |
| Implemented | Power Management Efficiencies | As part of ISO50001 activities, several monitoring and improvement points are implemented. |
| | Server Virtualization | |
| | Power Management Efficiencies | |
| | Cooling Efficiencies | |

ICT1.8

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

Yes

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 |
|-------------|--|---|
| LEED | Turkcell Datacenter Gebze-Certification in progress | 25% |

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)?

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

As per the locations and design of the data center buildings, incorporating renewable Energy or waste heat is not possible.

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 |
|-------------------|--|--|--------------------------------------|------------------------------------|
|-------------------|--|--|--------------------------------------|------------------------------------|

| 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 | | 22316 | 47277 | 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 |
|------------------|------------------|--------------------|-----------------------------|--|-------------------|
|------------------|------------------|--------------------|-----------------------------|--|-------------------|

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 |
|-------------------|--|--|--------------------------------------|------------------------------------|
|-------------------|--|--|--------------------------------------|------------------------------------|

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 |
|--------------|-----------------------|--|-------------------------|--|------------------------|---|---------|
|--------------|-----------------------|--|-------------------------|--|------------------------|---|---------|

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 |
|--------------|-----------------------|--|-------------------------|--|------------------------|---|---------|
|--------------|-----------------------|--|-------------------------|--|------------------------|---|---------|

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

Page: ICT4. Manufacture of software

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 |
|-------------------|---|---|---|---------------------------------------|
|-------------------|---|---|---|---------------------------------------|

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 |
|------------------|------------------|--------------------|-----------------------------|--|-------------------|
|------------------|------------------|--------------------|-----------------------------|--|-------------------|

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

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

Yes

ICT5.1

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

Turkcell facilitates several offices and buildings in order to manage project cycles. Troubleshooting, customer tailored application and software development, business development, sales and site management units are 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 |
|---|--|--|--------------------------------------|--|
| Business services (office based activities) | | 25504 | 54033 | Other: NDC and DC consumptions are deducted from whole building consumptions |

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 |
|------------------|--------------------|--------------------|-----------------------------|--|-------------------|
| | metric tonnes CO2e | Square meter | | | |

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 |
|------------------|------------------|--------------------|-----------------------------|--|-------------------|
| | MWh | Square meter | | | |

Further Information

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 |
|----------|---|---|---|---------------------------------------|
|----------|---|---|---|---------------------------------------|

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 |
|----------|------------------|------------------|--------------------|--------------------------------|---|-------------------|
|----------|------------------|------------------|--------------------|--------------------------------|---|-------------------|

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 |
|----------|------------------|------------------|--------------------|-----------------------------|--|-------------------|
|----------|------------------|------------------|--------------------|-----------------------------|--|-------------------|

Further Information

CDP