TÜRK TELEKOMÜNİKASYON A.Ş. - Climate Change 2019

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Türk Telekom, with 178 years of history, is the first integrated telecommunications operator in Turkey. Türk Telekom has continued to bring the newest and most advanced communication technologies to the Turkish people by realizing many firsts in its sector. founder of the Internet backbone in Turkey and 282 thousand kilometers of fiber network with the main provider Turk Telekom; but also broadband, mobile and fixed phone and TV products to 46 million subscribers, is offering one of Turkey's first integrated telecom operator. In 2015, Türk Telekomünikasyon A.Ş. adopted a “customer-oriented” and integrated structure in order to respond to the rapidly changing communication and technology needs of customers in the most powerful and accurate way, while maintaining the legal entities of Avea İletişim Hizmetleri A.Ş. and TTNET A.Ş. intact and adhering to the rules and regulations to which they are subject. Having a wide service network and product range in the fields of individual and corporate services, Türk Telekom unified its mobile, internet, phone and TV products and services under the single “Türk Telekom” brand as of January 2016. “Turkey’s Multiplay Provider” Türk Telekom has 14.4 million fixed access lines, 10.9 million broadband and 21.5 million mobile subscribers as of March 31, 2017. Türk Telekom Group Companies provide services in all 81 cities of Turkey with 33.447 employees with the vision of introducing new technologies to Turkey and accelerating Turkey’s transformation into an information society. Türk Telekomünikasyon A.Ş., providing PSTN and wholesale broadband services, owns 100% of mobile operator Avea İletişim Hizmetleri A.Ş., retail internet services, IPTV, satellite TV, Web TV, Mobile TV, Smart TV services provider TTNET A.Ş.,TV Broadcasting and VOD services provider Net Ekran Companies, convergence technologies company Argela Yazılım ve Bilişim Teknolojileri A.Ş., IT solution provider Innova Bilişim Çözümleri A.Ş., online education software company Sebit Eğitim ve Bilgi Teknolojileri A.Ş., call center company AssisTT Rehberlik ve Müşteri Hizmetleri A.Ş., wholesale data and capacity service provider Türk Telekom International and its subsidiaries.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2018	December 31 2018	Yes	1 year

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

Turkey

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

TRY

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

No

C1.1c

(C1.1c) Why is there no board-level oversight of climate-related issues and what are your plans to change this in the future?

	Primary reason	Board-level oversight of climate-related issues will be introduced within the next two years	Please explain
Row 1	We have started to work on our sustainability performance in a strategic way, and these efforts will provide outcomes starting only from next year. This year we did not have a board oversight as structure of the company have been changing after consolidation of different companies in the group, there was no chance to take it in the board level.	Yes, we plan to do so within the next two years	There is a plan for reconvene the sustainability platform and take the climate change issues through that body and hence we can have a board oversight on the climate-related issues next to the other material issues with regards to sustainability.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Environmental, Health, and Safety manager	Both assessing and managing climate-related risks and opportunities	Quarterly
Energy manager	Managing climate-related risks and opportunities	Annually
Other, please specify (Fleet management)	Managing climate-related risks and opportunities	Annually
Facility manager	Managing climate-related risks and opportunities	Annually

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Our company takes the climate change-related issues at the manager level and our Environment and HSE Manager is the main responsible for the climate change performance of the company. As this position is responsible for the overall environmental performance of the company and overall management of climate-related issues are dealt with there. In addition to that, the leadership regarding low-carbon products and services is distributed to different units, as technological solutions for enabling climate change opportunities are managed by different skill sets. Therefore, there is a collaboration between different business units both to cut our company-wise emissions and enabling technological solutions for different stakeholders to minimize GHG emissions overall. All of these mentioned managers are reporting directors who are reporting to the top management.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Who is entitled to benefit from these incentives?
Environmental, health, and safety manager

Types of incentives
Monetary reward

Activity incentivized
Energy reduction target

Comment
EHS Manager is the responsible for the implementation of overall climate change efforts.

Who is entitled to benefit from these incentives?
Facilities manager

Types of incentives
Monetary reward

Activity incentivized
Emissions reduction target

Comment
All facility managers are responsible for minimizing the GHG emissions due to their operations.

Who is entitled to benefit from these incentives?
Energy manager

Types of incentives
Monetary reward

Activity incentivized
Energy reduction target

Comment
Energy related risks are considered within the Enterprise Risk Management System and hence risk managers are incentivized through climate related issues. Also, they have the annual targets regarding the electricity use reduction.

Who is entitled to benefit from these incentives?
Other, please specify (Fleet manager)

Types of incentives
Monetary reward

Activity incentivized
Efficiency project

Comment
Fuel optimization by managing the routes as well as the car stock optimization in order to cut vehicle-based emissions.

Who is entitled to benefit from these incentives?
Other, please specify (Fleet manager)

Types of incentives
Monetary reward

Activity incentivized
Efficiency project

Comment
Personnel commuting routes optimization

Who is entitled to benefit from these incentives?
Facilities manager

Types of incentives
Monetary reward

Activity incentivized
Emissions reduction project

Comment
By optimizing the employee settling, 50+ buildings will be evacuated, and all emissions related electricity use and fuel consumption will be cut. Also, automizing some other buildings (6) emissions will be cut.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	1	
Medium-term	1	3	
Long-term	3	10	

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Annually	1 to 3 years	

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Türk Telekom Enterprise Risk Management Directorate conducts risk management activities in accordance with international standards in order to identify and evaluate risks that the company faces. Risk management processes comprise of four parts: establishing the context; Risk Assessment (includes "Risk Identification", "Analysis" and "Evaluation"); Risk Treatment (includes "Risk Response Decision" and "Risk Treatment Action"); Documentation and Communication (includes "Communication and Consultation" and "Monitoring, Review and Reporting"). Risks identified throughout the Enterprise Risk Management Process are evaluated at different stakeholder management levels of the company and finalized at Top Management level. Impact(s) of the risks identified are measured qualitatively and if possible, quantitatively. Those risks are ranked based on probability and impact scores and selected root causes of those risks are prioritized for efficient time and resource management. Decisions on appropriate risk response (avoid, transfer, reduce or accept) those risks are made by risk owners in line with Türk Telekom Group Enterprise Risk Management Directorate's guidance.

Climate change and sustainability issues are covered under other risk topics to the extent they relate to company strategies, finances, operations and compliance. Recently, climate change risks are not considered as top risks, as there are other primary risks can affect our business model. Yet, energy related risks are considered next to climate-related risks therefore they are managed accordingly. In addition to that, we are working on innovative, low-carbon products and services in our business line, and hence we try to minimize the possibilities those can impact our business.

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	We are following the current regulation in terms of GHG emission standards and scope, GHG inventories, and so on. Recently we are not subjected to severe changes due to the current regulation.
Emerging regulation	Relevant, sometimes included	After Paris Agreement and SDGs were introduced, the international stakeholders have started to take climate risks into consideration accordingly. Even though our government did not take place in Paris Agreement, there will still be some regulation regarding cutting the emissions, for example introducing the carbon taxes in some certain sectors, may have an impact on our business.
Technology	Relevant, always included	As being an ICT company, technology risks are always considered primarily, and these risks could also provide some opportunities for our business.
Legal	Not relevant, explanation provided	Legal risks with regards to climate change is not considered as a risk area for the company.
Market	Relevant, sometimes included	Climate-related risks can be considered as market risks as in case of increase in demand to low-carbon products . If our competitors will proactively supply low-carbon products and services, this could result in a loss of market share.
Reputation	Relevant, sometimes included	Turk Telekom identifies climate change as a potential source of reputational risk tied to changing customer or community perceptions. This could damage the regulatory environment and investor relationships. It could also make Turk Telekom less attractive to current or future employees. That's why we consider climate related risks a potential threat to our reputation and try to manage them proactively.
Acute physical	Relevant, sometimes included	Acute physical risks may affect our business due to the fluctuating weather temperature. As our cooling systems are a major source of energy use, hot weather conditions may end up increased operational costs for us.
Chronic physical	Not relevant, explanation provided	Chronic physical risks are not evaluated as top risks. We are more vulnerable to acute physical risks whereas chronic ones are easier to manage.
Upstream	Not relevant, explanation provided	We do not consider any further upstream risks related to climate change apart from the ones mentioned above.
Downstream	Not relevant, explanation provided	We do not consider any further downstream risks related to climate change apart from the ones mentioned above.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Enterprise Risk Management System informs the relevant bodies in terms of the top risks. Climate-related risks are not considered as crucial for our company and business model yet, but we run several projects and business development regarding minimizing the climate-related risks. Especially, low-carbon products and services we offer and also use in the company-wide are the basic tools for our risk management approach. Also, increase in the energy consumption is defined as a company-wide risk and managed accordingly. In order to mitigate this risk and its potential results, we run several energy saving projects both in terms of increasing efficiency of equipment and integrating purchasing channels to ensure the most efficient equipment take place in our operations. For instance, we have started to convert some of the equipments in base stations so that they do not need any futher air conditioning and cooling. By this means, we are expecting a significant amount of emission reduction.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

No

C2.3b

(C2.3b) Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

	Primary reason	Please explain
Row 1	Evaluation in process	We are planning to assess the climate related risks as they also envision the opportunities for our business.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities but are unable to realize them

C2.4b

(C2.4b) Why do you not consider your organization to have climate-related opportunities?

	Primary reason	Please explain
Row 1	Opportunities exist, we are unable to realize them	Climate change is not considered among the top risks, just because our business model does not rely heavily on fossil fuels. We are evaluating the energy-related risks in our business plan and in turn they can also be considered as climate-related risks, as well as opportunities. Even though those risks are identified and evaluated, we still do not consider them as climate-related risks and opportunities. Furthermore, as a technology company, we are aware of the fact that we can enable other companies and other sectors by providing innovative and low-carbon solutions. Next to our climate-related risks efforts, we will be surfacing the opportunities towards the low-carbon economy.

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

No, but we anticipate doing so in the next two years

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

As a leading ICT company, Türk Telekom provides products and services which support the low-carbon economy, by spending efforts on decreasing its GHG emissions, as well as supporting different sectors with low-carbon product and service solutions. GHG management and combating climate change is one of the major issues for the company and those are already embedded into the company's overall strategy. The governance model enables to manage the issue in the top level (senior manager and sustainability committee directly reporting to the board) which also reveals the understanding the importance of the issue. There are a lot of recognition and incentives towards reduction of emissions as well as innovative ideas for different sectors to decrease their emissions. The company has a Climate Change Policy statement which frames the governance and the overall management of the issue. According to that, climate change related issues are considered in the relevant departments and units and are reported to the sustainability committee which directly reports to the Board. The Policy Statement is referring to the Paris Agreement as well as the Goal 13, Climate Action of famous Sustainable Development Goals of United Nations. By this manner, Türk Telekom stands for combating climate change by following and embodying the recent intergovernmental developments. ICT is a fast-developing sector by facilitating many low carbon solutions. We are working to identify the needs of our customers and offer cutting-edge services that enable carbon reductions throughout the value chain (e.g. telepresence, cloud computing, increased access to broadband and improving network capabilities). We have numerous customer-facing low carbon solutions such as e-billing and low energy phones. There is always an allocated budget for supporting the development of such products and services and we keep innovating regarding the low-carbon ones.

C3.1g

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

Climate-related issues are not considered as primary risk factors for the continuation of our business. Also, we are not providing our services in an energy-intense sector, so that our share in the overall GHG emissions is relatively low. However, we are aware of the fact that we can still do more in terms of low-carbon products and services for enabling other sectors being sustainable. Therefore, we are considering carrying out scenario analysis in the upcoming reporting years as we can have somewhat significant effect on mitigation efforts.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

No target

C4.1c

(C4.1c) Explain why you do not have emissions target and forecast how your emissions will change over the next five years.

	Primary reason	Five-year forecast	Please explain
Row 1	We are planning to introduce a target in the next two years		There is no forecast could be done as the future projections of the company is not clear yet due to the re-organization. Investment decisions will be made by the top management, and according to the growth projections, we can run a forecasting project for our emissions.

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*		
Implemented*	6	7956
Not to be implemented		

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative type
Energy efficiency: Processes

Description of initiative
Other, please specify (Next Gen Network Transformation)

Estimated annual CO2e savings (metric tonnes CO2e)
3876

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
9500000

Investment required (unit currency – as specified in C0.4)
0

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Investment required is given as "zero" since all the investment was made in the previous reporting year where the initiative has started. NGN Transformation project: The migration to IP based soft switch network infrastructure has been reducing the number of exchanges and operational expenses. The telephone network covering all of Turkey has been migrated into an IP based network. With this migration of the existing PSTN into IP infrastructure, every citizen in Turkey enjoys a large number of value-added services wherever they are. As a result of the reduction of exchange areas, this project enables a reduction in cooling needs, which further reduces GHG emissions.

Initiative type
Energy efficiency: Building services

Description of initiative
Building controls

Estimated annual CO2e savings (metric tonnes CO2e)
2397

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
3400000

Investment required (unit currency – as specified in C0.4)
810000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
DX Air Conditioning Transformation project: Air conditioning systems have been replaced with new generation energy efficient conditioning systems. As a result of this transformation, operation costs and energy consumption levels have decreased. The payback period is considered as 1-3 years, as this is a continuous project, therefore investment cost is distributed over years.

Initiative type
Energy efficiency: Building services

Description of initiative
Building controls

Estimated annual CO2e savings (metric tonnes CO2e)
561

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
500000

Investment required (unit currency – as specified in C0.4)
59000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Air Conditioning optimization projects: Air conditioning systems are optimized company-wide by Back-up applications, fan optimization solutions, Wall-Type Air Conditioner Optimization Projects, Operation of Air Conditioning Indoor Fans by Driver, DC Energy Halls Set Value Increase which resulted in energy savings.

Initiative type
Energy efficiency: Building fabric

Description of initiative
Other, please specify (Optimization of indoor space use)

Estimated annual CO2e savings (metric tonnes CO2e)
408

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
1000000

Investment required (unit currency – as specified in C0.4)
1500000

Payback period
1-3 years

Estimated lifetime of the initiative
16-20 years

Comment
The optimization of system rooms as well as their consolidation. Non-used air conditioners are used somewhere else, therefore emissions are cut.

Initiative type
Energy efficiency: Building services

Description of initiative
Building controls

Estimated annual CO2e savings (metric tonnes CO2e)
510

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2500000

Investment required (unit currency – as specified in C0.4)
57000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Expired air conditioners which cool down the system rooms are changed with the new technology ones.

Initiative type
Low-carbon energy installation

Description of initiative
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)
204

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
200000

Investment required (unit currency – as specified in C0.4)
500000

Payback period
1-3 years

Estimated lifetime of the initiative
21-30 years

Comment
Different power (3kW-30kW) solar energy systems have been installed in 16 power plants.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for other emissions reduction activities	Every year, when the yearly budget is determined, the amount allocated for saving and efficiency projects, which in turn cause emissions reduction, is also determined. Hence, every year there is a certain allocation for emission reduction activities.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation
Product

Description of product/Group of products
Cloud-eye system is a remote camera system and a surveillance agent which helps to security bodies to investigate issues easily. It enables official security authorities to reach more areas virtually, which results in less patrolling. By providing optimization and efficiency, this technology avoids unnecessary emissions from patrolling.

Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Evaluating the carbon-reducing impacts of ICT

% revenue from low carbon product(s) in the reporting year
0.01

Comment

Level of aggregation
Group of products

Description of product/Group of products
With Smart Cities, a new generation urbanism approach and new generation city technologies have been developed to develop

integrated solutions tailored to the needs of each province, thus saving resources and thus serving the sustainable society. Türk Telekom Smart Cities, which has been implemented to permanently facilitate the lives of citizens and public authorities by using information communication technologies, enables to make forward decisions by processing and interpreting the data collected from different channels such as sensors and vehicles. Smart traffic, smart environment, smart health, smart security, smart energy, and smart management under the headings of the new generation of applications offered city life is facilitated. In this context, Turkey's first integrated new generation city project was implemented in Karaman. Subsequently, Antalya and Kars are becoming new generation cities. The smart applications developed by Türk Telekom are integrated into public services and urban life. All services in public services and energy saving from traffic to health are provided through a single interface in the Smart City Operations Center and over 20 applications including smart traffic, environment, health, safety and energy applications are included in the project. Thanks to the new generation cities, public interest has been provided in locations with intelligent systems. For example, with the new generation city applications in Karaman and Antalya, 25% savings in electricity and 30% in irrigation were achieved. Due to the decrease in time spent in traffic, carbon emissions decreased by 25% and traffic accidents were reduced by up to 40%. More than 400 people have been followed up for chronic diseases and their health conditions have been followed and periodic controls have been started. Over 100,000 people have benefited from the open-air Wi-Fi service and have free access to information from these points. In addition to the 3 cities currently in progress, it is planned to be expanded in 81 cities.

Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Evaluating the carbon-reducing impacts of ICT

% revenue from low carbon product(s) in the reporting year
0.08

Comment
Karaman (20 different applications) Kars (12 different applications) Antalya Metropolitan Municipality (10 different applications) Kırşehir Municipality (7 different applications) Mersin Metropolitan Municipality (Smart Intersection) Edirne Municipality (City Information Screen) Osmaniye Kadirli Municipality (Chronic Patient Monitoring) Erzurum Yakutiye Municipality (City Information Screen) Diyarbakır Metropolitan Municipality (City Information Screen) Giresun Municipality (Smart City Furniture) Osmaniye Municipality (Smart City Furniture) Bayburt Demirözü Municipality (Smart City Furniture) Kahramanmaraş Metropolitan Municipality (Energy Bicycle)

Level of aggregation
Company-wide

Description of product/Group of products
Video conference technology is widely used among our facilities, headquarters, and different locations. Videoconference allows for communication between people in two or more locations through simultaneous two-way video and audio transmissions. Via this service, several users in different locations are able to communicate without the need to travel and meet face to face. We have done more than 15.5 thousand VK rooms booking.

Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Evaluating the carbon-reducing impacts of ICT

% revenue from low carbon product(s) in the reporting year
0

Comment
As this is a company-wide service, there is no revenue related. We avoided approximately 1,300 ton CO2eq according to our calculations. Calculation methodology: Emission calculation due to the avoided emission is based on several assumptions. Not every video conference is causing an avoided flight, therefore, we use the fraction of 0.5. In addition to that, each VK has four participants on average, each meeting which avoids a flight is actually avoiding for two participants. Therefore we, in total, avoid around 80 thousands domestic flights which in Turkey can be calculated as 500 km of distance.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start
January 1 2015

Base year end
December 31 2015

Base year emissions (metric tons CO2e)
117770.5

Comment

Scope 2 (location-based)

Base year start
January 1 2015

Base year end
December 31 2015

Base year emissions (metric tons CO2e)
643011.2

Comment

Scope 2 (market-based)

Base year start
January 1 2015

Base year end
December 31 2015

Base year emissions (metric tons CO2e)
643011.2

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.
IPCC Guidelines for National Greenhouse Gas Inventories, 2006

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
108925.1

Start date
January 1 2018

End date
December 31 2018

Comment

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
122256

Start date
January 1 2017

End date
December 31 2017

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment
We purchase electricity from the main grid. Turkish Electricity Grid's RECs certification, - direct contracts (low-carbon, renewable etc.) - residual mix totals attributes are not available and that's why our market-based Scope 2 emissions are same as our location-based Scope 2 emissions.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
591770.5

Scope 2, market-based (if applicable)
591770.5

Start date
January 1 2018

End date
December 31 2018

Comment

Past year 1

Scope 2, location-based
638032

Scope 2, market-based (if applicable)
638032

Start date
January 1 2017

End date
December 31 2017

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Capital goods

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Upstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Waste generated in operations

Evaluation status
Relevant, calculated

Metric tonnes CO2e
609.4

Emissions calculation methodology
We calculated total emissions due to paper and cartridges use according to the number of use. The data is obtained internally.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e
2945.7

Emissions calculation methodology
Business travel data is gathered from the relevant supplier in terms of destinations and we converted and calculated them into GHG emissions. Domestic, European and transcontinental flights got different coefficients.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Employee commuting

Evaluation status
Relevant, calculated

Metric tonnes CO2e
6291.4

Emissions calculation methodology
We gathered data from the relevant supplier and calculated the emissions according to the distances, vehicle size and engine emission type.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
We do not have any leased assets in the upstream of our business.

Downstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
Downstream transportation and distribution do not fall into our scope for this response.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
Our products do not have any further processing after they are sold.

Use of sold products

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
Our products and services are hard to be defined as energy use. Therefore, this part is not added into the calculations.

End of life treatment of sold products

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
There are some targets and projects regarding the collection of e-waste and yet they are not considered as part of the emission calculations.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
We do not have any downstream leased assets.

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
We do not have any franchises. Therefore, they are not added into the calculation.

Investments

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
We do not have any further emissions due to the investments done in the reporting year.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
There is no other emission source in the upstream.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation
There is no other emission source in the downstream.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.00003429

Metric numerator (Gross global combined Scope 1 and 2 emissions)
700695

Metric denominator
unit total revenue

Metric denominator: Unit total
20430900000

Scope 2 figure used
Location-based

% change from previous year
18.14

Direction of change
Decreased

Reason for change
We had 760,288 metric tonnes CO2e, due to our operations within Scope 1+2. This year this figure has changed into 702,187 tonnes of CO2e, due to our constant improvement practices in terms of energy use, which results in 58,101 tonnes CO2e. In addition, our revenue is increased compared to last year (2017:18.139.554.000 TL, 2018: 20.430.900.000 TL). Hence, the intensity figure is decreased.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	108304.2	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	132	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	452.9	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Turkey	108925.1

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Data centers	1862
Base stations	20490
Transmission lines	40461
Buildings	17222
Transportation	28889

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Turkey	591770.5	591770.5	1385768	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Data centers	30797	30797
Base stations	200111	200111
Transmission systems	344661	344661
Buildings	16202	16202

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) 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.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable>		
Other emissions reduction activities	59593	Decreased	7.83	We had 760,288 metric tonnes CO2e, due to our operations within Scope 1+2. This year this figure has changed into 700.695 tonnes of CO2e, due to our constant improvement practices in terms of energy use, which results in 58,101 tonnes CO2e. Hence, we were able to decrease our emissions by almost 8% compared to the previous reporting year.
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

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

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	No

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	215568	215568
Consumption of purchased or acquired electricity	<Not Applicable>	2100	929012	931112
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	0	239088	239088
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	2100	1385768	1385768

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)
Diesel

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
120393

MWh fuel consumed for self-generation of electricity
18234

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment
102,159 MWh is consumed by vehicles use diesel as fuel.

Fuels (excluding feedstocks)
Fuel Oil Number 1

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
2764

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
2764

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Natural Gas

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
61480

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
61480

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Other Petroleum Gas

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
23486

MWh fuel consumed for self-generation of electricity
18820

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment
4,666 MWh of gasoline is used for car fleet.

Fuels (excluding feedstocks)
Coal

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
6328

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
6328

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Coal

Emission factor
1.489

Unit
kg CO2e per m3

Emission factor source
IPCC AR5 adjusted by the national emission factors released by the state.

Comment

Diesel

Emission factor
2.6652

Unit
kg CO2e per m3

Emission factor source
IPCC AR5 adjusted by the national emission factors released by the state.

Comment

Fuel Oil Number 1

Emission factor
3.1265

Unit
kg CO2e per m3

Emission factor source
IPCC AR5 adjusted by the national emission factors released by the state.

Comment

Natural Gas

Emission factor
1.9422

Unit
kg CO2e per m3

Emission factor source
IPCC AR5 adjusted by the national emission factors released by the state.

Comment

Other Petroleum Gas

Emission factor
2.23093

Unit
kg CO2e per m3

Emission factor source
IPCC AR5 adjusted by the national emission factors released by the state.

Comment

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor
Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company

Low-carbon technology type
Solar PV

Region of consumption of low-carbon electricity, heat, steam or cooling
Europe

MWh consumed associated with low-carbon electricity, heat, steam or cooling
2100

Emission factor (in units of metric tons CO2e per MWh)
0

Comment

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Türk Telekom Independent Assurance Statement.pdf

Page/ section reference
1

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Türk Telekom Independent Assurance Statement.pdf

Page/ section reference
1

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope
Scope 3- at least one applicable category

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Attach the statement
Türk Telekom Independent Assurance Statement.pdf

Page/section reference
1

Relevant standard
ISAE3000

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our customers

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Education/information sharing

Details of engagement

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

% Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

It is hypothetically considered that as we are running public campaigns in terms of e-invoice, which significantly reduce paper consumption and hence has a limited impact on our Scope 3 emissions.

Impact of engagement, including measures of success

We have not yet calculated the impact of the project; however, it is in progress. On the other hand, thanks to the recent efforts, we have issued around 70 million paper invoices whereas the number of e-invoices steeped to nearly 220 million. More than 3/4 of the invoices are now electronic.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Other

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

By being member of different multi-stakeholder initiatives, we are working towards lobbying the policiy makers about climate change-related issues, especially, the enabling dimension of ICT sector. We were a member of Global e-Sustainability Initiative (GeSI) for years. By this engagement we have a chance to follow the recent developments regarding the low carbon economy and we position the company aligned with these developments. This give us a chance to lobby the policy-makers with a strong background in enabling effect of ICT. In fact, Türk Telekom is the first Turkish company at GeSI. We were also taking part at Energy Efficiency Working Group operating under GeSI. Türk Telekom is also the first telecom operator to be elected to the Board of Directors of the Eurogia+ Cluster operating under the European Union's EUREKA R&D Program. Through this membership, Türk Telekom aims to have a voice in the formulation and development of European energy efficiency and low carbon technologies. We have also been a member of Sürdürülebilir Kalkınma Derneği (SKD - WBCSD Turkey Branch), and actively participating the the working groups such as Women Employment and Equal Opportunities, Sustainable Agriculture and Access to Food, Energy, Decent Works, Sustainable Consumption and Sustainable Finance and Innovation. This also gives us the opportunity to see the bigger picture related to sustainable society and hence we can understand the interconnections among these issues through the lens of climate change and low carbon society. Our presence in Energy Working Group is particularly important for combating climate change and creating new solutions towards a low-carbon economy.

C12.3f

(C12.3f) 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?

We have published a policy on combating climate change internally, and our approach to the climate-related issues are disclosed there. In the light of this policy, we are also working towards a low-carbon society, with our products and services offered. We have also been taking part of CDP since 2010 (with a break between 2013-2016) and disclosing our performance with investors.

C12.4

(C12.4) 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
In mainstream reports

Status
Complete

Attach the document
TT_2018_Annual_Report.pdf

Page/Section reference

Content elements
Strategy
Other metrics

Comment

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	HSE and Environment Manager	Environmental, health and safety manager

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Non-public	Investors

Please confirm below

I have read and accept the applicable Terms