TÜRK TELEKOMÜNİKASYON A.Ş. - Climate Change 2021

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 331 thousand kilometers of fiber network with the main provider Turk Telekom; but also broadband, mobile and fixed phone and TV products to 50.4 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 16.3 million fixed access lines, 13.4 million broadband and 23.2 million mobile subscribers as of December 31, 2020. Türk Telekom Group Companies provide services in all 81 cities of Turkey with 34.748 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
Reporting year	January 1 2020	December 31 2020	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas 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 chosen approach for consolidating your GHG inventory.

Operational control

C1. Governance

C1.1

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

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	Early Identification and Management of Risks Committee and Head of Enterprise Risk and Business Continuity: Sustainability efforts are sponsored and monitored by the CEO. Environmental risks and Climate Change issues are handled within the scope of sustainability risk by the Head of Enterprise Risk and Business Continuity. Head of Enterprise Risk and Business Continuity reports to Board Committee of Early Risk Detection which is composed of 3 board members. Head of Enterprise Risk and Business Continuity works with the Directorate which is responsible for Occupational Health and Safety and environmental issues. In addition, Chief Risk Officer fosters awareness of risk issues in the organization, sets risk policy, measures risk, reports exposures, and proactively works on interactions between economic,strategic and operational risks.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding risk management policies	<Not Applicable>	Determined risks are taken into the agenda according to their relevance and importance. Therefore, climate change risks under environmental risks category are handled in a similar fashion by Board Committee of Early Risk Detection. When a risk is taken into the agenda of the committee, it means that causes and effects of the risks, periodic prevention controls, risk calculations and KRI metrics, actions, targets, priorities, roadmaps, demands and needs are shared with the board through the Board Committee. This in turn grants support from the board.

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)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Environmental, Health, and Safety manager	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Annually
Other, please specify (Risk Analyst)	<Not Applicable>	Assessing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Executive Officer (CEO)	<Not Applicable>	Other, please specify (Reviewing climate-related risks and opportunities)	<Not Applicable>	Half-yearly
Risk manager	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (Board Member)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Half-yearly

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).

Climate Change issues are taken into agenda as Environmental Risks in the applications of Committee of Early Risk Detection at least twice a year (depending on the demand/need this number is increased). Sustainability and risk management efforts are presented to the CEO, responsible business units and the committee. Responsibility of environmental risks and sustainability efforts are under CRO, risk analysts and Head of group risk management. 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?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Every business unit has annual targets according to their job descriptions. Such as energy reduction targets/projects, fuel reduction targets/projects and CDP related targets. When a target assigned to a business unit is achieved, responsible employees are granted a performance bonus in proportion to their contributions. If a target is not achieved, managers of responsible employee/s arrange a feedback meeting to give corrective feedback. In addition, performance score of relative employee/s drop when a target is not achieved.

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).

Entitled to incentive	Type of incentive	Activity inventivized	Comment
Environmental, health, and safety manager	Monetary reward	Energy reduction target	EHS Manager is the responsible for the implementation of overall climate change efforts.
Facilities manager	Monetary reward	Emissions reduction target	All facility managers are responsible for minimizing the GHG emissions due to their operations.
Energy manager	Monetary reward	Energy reduction target	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. Target examples: *Ensuring effective use of energy by putting the rectifiers used in Mobile Access areas (Base station/Hub/Remote) into sleep mode *Ensuring energy savings by air conditioning optimization. Number of optimized devices. *planning all Fixed Radiolink Systems across the country to operate more effectively (System reduction, BW savings, OPEX gain, Space and Energy savings) *Ensuring integrity by labeling all the cables of energy infrastructure systems of a total of 100 central buildings carrying traffic
Other, please specify (Fleet manager)	Monetary reward	Efficiency project	Fuel optimization by managing the routes as well as the car stock optimization in order to cut vehicle-based emissions. -Personnel commuting routes optimization Target examples: *Optimizing the fleet monthly out-of-hours activation rate at 15% * 5% reduction in fuel consumption across the company compared to last year's consumption
Other, please specify (Fleet manager)	Monetary reward	Efficiency project	Personnel commuting routes optimization
Facilities manager	Monetary reward	Emissions reduction project	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. Target example: *Saving by reducing the printing fleet by 50 devices * Completion of the supply of waste units and dissemination throughout the company within the scope of the Zero Waste Project * Determining the places that can be depopulated by centralizing the building and conveying the business demands needed for relocation to the relevant units. * storage installation in order to prevent the loss of antifreeze liquid in the cooling towers of the buildings.
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target Energy reduction target	Every business unit has annual targets according to their job descriptions. Such as energy reduction targets/projects, fuel reduction targets/projects and CDP related targets. When a target assigned to a business unit is achieved, responsible employees are granted a performance bonus parallel to their contribution..Besides CEO scorecard includes specific sustainability target related to ESG titles.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

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

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

According to the Corporate Risk Management principles, "substantive financial or strategic impact" is defined as financial impact which effects 250 million Turkish Liras or more. Climate Change risks which are under Environmental Risks are not evaluated under this definition.

Climate-related risks such as global warming and drought crisis create many investment requirements for cyclical conservation of water, utilization of gray water, reduction of emissions and utilization of renewable energy sources in order to protect limited resources and ensure efficient use.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Climate Change risks are evaluated under sustainability and environmental risks. Through this evaluation, risks that can emerge from our processes are considered, suppliers are evaluated in parallel to climate change and Türk Telekom conducts its applications and develop products while minimizing the negative impact on the environment. The company handles all risks, including climate-related risks, at least twice a year. The Corporate Risk Management department works with the risk owner and stakeholder on the assessment and measurement of risks,new risk topics and tracking action progress with s as its weekly work. Global climate change risk is evaluated within the scope of sustainability risk. In the context of the global climate crisis, physical and environmental security risk, drought and water crisis, and the increase in demand for limited natural resources are followed. Raising environmental awareness to a sufficient level throughout the company, following up-to-date environmental laws, efforts to improve environmental performance in terms of carbon footprint and greenhouse gas emissions, investments for adopting sustainable energy sources within the company, separation and recycling and disposal studies are also carried out.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Corporate Risk Management monitors and applies changes to comply with updates on current regulations, benchmarks and regulative changes which are deemed best practices. In addition, 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 The company has not received any financial penalties and it has not been involved in a situation that will cause a social reaction.
Emerging regulation	Relevant, always included	Corporate Risk Management monitors and applies changes to comply with updates on current regulations, benchmarks and regulative changes which are deemed best practices. Considering the possibility of emerging tariff and quota regulations of governrment, our company works on carbon reduction scenarios that will turn this situation into an opportunity. In addition, 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. Even though Turkish government did not take a place in Paris Agreement, our company works on decreasing carbon levels to adjust Paris agreements' terms and emission reduction scenarios
Technology	Relevant, sometimes included	As being an ICT company, technology risks are always considered primarily, and these risks could also provide some opportunities for our business. While focusing on establishing renewable energy fields, increasing the efficiency of air conditioning systems, replacing inefficient devices with energy-saving ones. In addition ,smart city services developed by our company contribute to the public sectors especially municipalities.
Legal	Relevant, always included	Especially in the field of regulations, penalties and inspections Legal risks with regards to climate change is considered as primary. Besides, The legal compliance of newly developed products and solutions is also evaluated before they are put into use.
Market	Relevant, sometimes included	Raw material, supply and service related risks are indirectly monitored under the risk inventory as risks that could be caused by climate change. Customer expectations and demands are handled with environmentally friendly methods bring them into a circular economy. 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, always 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 is why we consider climate related risks a potential threat to our reputation and try to manage them proactively.
Acute physical	Relevant, always 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. Natural disasters such as Flood and earthquake are considered in the scope of business continuity risks. Acute physical risks are evaluated through business impact analysis and scenarios prepared by business continuity teams.
Chronic physical	Relevant, always included	Chronic physical risks form the backbone of our risk assessment. Although more effort is spent on acute physical risks for periodic plannings, company uses all the opportunities of technology to reduce the effects of chronic physical risks for example subcontractor audits.

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?
Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Risk 1

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Reputation	Stigmatization of sector

Primary potential financial impact
Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
At Türk Telekom, issues related to climate change are managed by the Company's Environment and OHS Directorate. The Environment and OHS Department is responsible for the company's overall environmental performance and the overall management of climate-related issues. There is a multi-stakeholder structure for combating climate change and environmental impacts, as leadership on low-carbon products and services and technological solutions that enable climate change opportunities are managed by different units within the company. Energy-based risks within the company are evaluated within the scope of corporate risk management. Being aware of the necessity of reducing greenhouse gas emissions, one of the most important causes of climate change, Türk Telekom continues its efforts to reduce greenhouse gas emissions arising from its corporate activities. The company includes greenhouse gas management and combating climate change in its overall strategy. Türk Telekom's goal at this stage is to continue to set an example for the sector in the fight against climate change and to be a facilitator for companies in other sectors.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation
E-invoice Application Türk Telekom aims to support sustainability and takes initiatives with the perspective of preventing waste, which is a global problem, at its source. For this purpose, Türk Telekom aims to increase the rate of customers using e-invoices, and organizes new campaigns to increase this rate. In this context, the prerequisite of being an SMS e-invoice subscriber has been added as a condition to participate in the existing “Sil Süpür” campaign in the mobile segment, where significant advantages are offered to customers. Thanks to the use of e-invoices in 2019, Türk Telekom's contribution to the environment is approximately; • 66 thousand trees, • 16 million Kw/hour energy, • 125 thousand cubic meters of water were saved. Digital Documentation Application With a new application launched in 2019, Türk Telekom started to receive the legal documents required from its customers in the digital environment with tablets and biometric pens, which it distributes to dealers. With this new development; • Dealers focus on customer satisfaction by facilitating their paperwork processes, • Increase in customer satisfaction by enabling dealers to carry out the paperwork process, which is a legal requirement for customer information registration, in a much faster and easier digital environment, • Costs and environmental impacts caused by both paper and the transportation and storage of documents have been saved. Other Projects in Türk Telekom Buildings Some of Türk Telekom's efforts to reduce energy consumption within the scope of LEED certification for its own buildings can be listed as follows; • Energy efficient devices (Air Conditioning, Combi Boiler, Pump etc.) and lighting products (led fixtures and lamps) are used in all new projects. • More efficient and environmentally friendly products are preferred instead of aging and low energy efficient devices and lighting elements. • Considering the amortization periods, the building automation system is used in all large buildings, thus saving both electricity and fuel costs. • Building centralization and space optimization studies are carried out, reducing the office space used, thus providing high savings in energy costs.

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Upstream

Risk type & Primary climate-related risk driver

Technology	Transitioning to lower emissions technology

Primary potential financial impact
Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Türk Telekom systematically reduces its carbon emissions with its efforts to use renewable energy and efficiency projects. There are solar energy systems with a total power of 2.3 MW in over 1,700 locations, and it is expected to reach an installed capacity of 4 MW by the end of 2023 with the new investments planned. In order to reduce carbon emissions, Türk Telekom is increasing the installed power of solar energy system to 10 MW and spreading solar energy system supported charging stations in parallel with the widespread use of electric vehicles are among the medium and long-term targets. Although Türk Telekom is also committed to Turkey's electric production targets, the company aims to meet more than 50% of the electricity it uses from renewable sources and to reduce its carbon emissions, with the realization of the solar energy system capacity increase targets.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation
TT Mobile Swap and Modernization Projects Within the scope of the swap project carried out in more than 3,000 locations in our Izmir-Bursa Regions in our Mobile Network in 2020-2021, our base stations were renewed with efficient devices. With this transformation, more than 20 GWh of electricity was saved annually from the electricity consumption of the base stations. TT Mobile Base Stations Battery Conversion Project By using high temperature resistant and new generation smart batteries in base stations, air conditioning temperature set values are increased, and solutions without air conditioners are focused on in order to save energy. By 2022, the battery conversion of more than 50% of the base stations will be completed. By 2025, it is aimed to complete the battery conversions at all suitable sites. Dissemination of Free Cooling Solutions in Telco System Halls In order to reduce the electricity consumption used for cooling, it is aimed to expand the solutions that allow for lower cost cooling with direct outside air in all physically suitable telco system halls. While direct free cooling solutions are widely used in container structures, reinforced concrete etc. In buildings, it could be applied in a limited number in special projects. Contrary to global solutions, Türk Telekom offers simple, low-cost, fast-implementable, flexible and high-capacity solutions with reinforced concrete, etc., developed together with its suppliers. It has also managed to save a significant amount of energy in the telco halls in the building. As of the end of 2020, 7 GWh of energy is saved annually from the projects completed. Commissioning of the Smart Energy Management System The project aims to provide access to all devices in Türk Telekom fixed and mobile energy infrastructure, and to create an artificial intelligence supported management system by singularizing existing applications. Field-based electricity consumption analysis, instant detection of faults affecting consumption, control of air conditioner temperature set values, control of operating redundancy of devices, telco load trends, etc. Continuous determination of the potential for energy efficiency will be ensured through analyzes and optimizations will be made quickly. With the analyzes to be made with the alarm, malfunction and maintenance data of the equipment, improvements will be made in device replacement processes, malfunctions and spare parts usage. The project will be started in 2021.

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Legal	Exposure to litigation

Primary potential financial impact
Increased credit risk

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Base stations are established by taking precautions for efficiency and human health. All of the mobile devices we use today communicate via base stations over electromagnetic frequencies. Although the concerns related to our health have been discussed in the public for a long time, it has been stated in the research conducted by the World Health Organization that no health problem that may occur due to any device and/or base station within international borders has been encountered. Türk Telekom continues its activities within the limits determined by the Information Technologies and Communications Authority.

Time horizon
Medium-term

Likelihood
Unlikely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation
The measures taken and the solutions developed by Türk Telekom in order to achieve higher efficiency in base stations and protect human health within the framework of responsible business approach are given below: • Electromagnetic field measurements are made before and after the installation of the base stations, ensuring that they work safely in terms of people and the environment. • All necessary safety equipment is used and updates are made in order to prevent stations from being affected by natural disasters and endangering the environment and public health, as a requirement of human health and environmental safety. In 2019, 750 base station towers were examined in detail and updates were made as needed. • Base stations are monitored 24 hours a day, and the highest level of operational efficiency is ensured by responding to the site in emergency situations and natural disasters as quickly as possible. •High energy consuming equipment in use at Türk Telekom are replaced by models with lower energy consuming models. Analysis processes continue for the final results of the post-project consumption reflections. • Direct current energy sources with high energy loss have been replaced with high efficiency models. The old-style direct current backup units, which were wasted after the replacement, were recycled in an environmentally friendly way at the recycling facilities. • Care is taken to minimize human and environmental interference at base stations during the planning, design, installation and operation phases, and all necessary precautions are taken. • Nature-friendly air conditioning gas is used in base stations to reduce greenhouse gas emissions. In 2019, air conditioners in the fields were removed and after software updates, old-style free-cooling devices were installed in the fields for trial purposes, and energy consumption was started to be monitored. In 2020, expansion works were carried out according to the project results.

Comment

Identifier
Risk 4

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Reputation	Stigmatization of sector

Primary potential financial impact
Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Türk Telekom attaches importance to efficiency in water use within the scope of its sustainability approach and environmental policies for a livable world. Efforts to save water are constantly carried out and the results are closely followed in order to prevent the water shortage that has begun to be experienced in the geography that Turkey is in, and to leave a more livable world to future generations, and to reduce water consumption. Türk Telekom uses the water source coming from the network for its activities. The water that comes out as a result of use is the wastewater generated as a result of its activities and is of domestic nature. Domestic wastewater generated in workplaces is connected to the sewerage network of the municipality to which they are connected. For this reason, the company's wastewater discharge does not cause any environmental pollution. The water generated as a result of the company's activities is not discharged to the natural environment. Türk Telekom Headquarters, Regional Directorate and Telecom Directorate buildings have storage systems that will meet the water requirement for a minimum of 2 days, anticipating the problems that may occur in water supply.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation
The majority of Türk Telekom water consumption occurs as a result of the general use of the personnel working in the buildings. In order to reduce consumption, battery saving apparatus, use of photocell batteries, raising awareness among personnel, etc. Studies with tangible results are carried out and supported by the company's senior management. Studies carried out for saving purposes in Office Buildings are as follows; • Water saving devices are attached to the faucets. • Toilet cisterns are kept at a minimum level to meet the need with the float adjustment. • Garden irrigation is done in an efficient and controlled manner with automation systems. • Photocell batteries are used in all new projects and extensive renovations. • With the Building Centralization and space optimization project, we contribute to the reduction of the water consumed in these areas by reducing the building and office areas that are used. • In the Ankara Headquarters Tower Building, the waste water collected from tea stoves and sinks is reused in toilet reservoirs after the necessary treatment processes. Efforts are underway to measure and report the savings made as a result of savings appliactions.

Comment

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

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of lower-emission sources of energy

Primary potential financial impact
Reduced direct costs

Company-specific description
Türk Telekom carries out its activities in order to provide the highest level of resource savings and to serve the sustainable society by expanding the use of new generation communication technologies in energy, agriculture, industry, transportation, health, buildings and cities. Türk Telekom systematically reduces its carbon emissions with its efforts to use renewable energy and efficiency projects. There are solar energy systems with a total power of 2.3 MW in over 1,700 locations, and it is expected to reach an installed capacity of 4 MW by the end of 2023 with the new investments planned. In order to reduce carbon emissions, Türk Telekom is increasing the installed power of solar energy system to 10 MW and spreading solar energy system supported charging stations in parallel with the widespread use of electric vehicles are among the medium and long-term targets. Although Türk Telekom is also committed to Turkey's electric production targets, the company aims to meet more than 50% of the electricity it uses from renewable sources and to reduce its carbon emissions, with the realization of the solar energy system capacity increase targets.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
Türk Telekom commissioned a solar-powered base station in Ağrı. With this application, Türk Telekom provided added value to Turkey's efficient use of energy resources and the expansion of renewable energy, while also increasing the communication quality of the villages in the region. Aiming to raise awareness about energy efficiency and contribute to the reduction of foreign dependency in energy, Türk Telekom established a solar energy system-operated base station in the pasture area in the Güneysöğüt neighborhood of Taşlıcay district of Ağrı province, located in the service area of Erzurum Regional Directorate. Thanks to the solar powered base station with a height of 50 meters and serving 7 villages, the communication quality of the villages in the region has increased.In addition, with the Solar Energy System installed on an area of 100 square meters in order to prevent interruptions in mobile services due to the harsh winter conditions in the region, a backup time of 20 hours has been achieved.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description
Digital transformation is designed to increase efficiency in all areas of business processes, provide faster access and increase customer satisfaction. Türk Telekom carries out studies to rapidly implement digital transformation, improve technology systems and user interfaces, and enrich its portfolios by expanding its infrastructures in order to provide a new generation customer experience. Türk Telekom started to use value-added digital services in their portfolios more effectively in order to improve customer

loyalty and satisfaction. Türk Telekom has taken it upon itself to offer its products and services to all its subscribers in a way that will provide the best customer experience in Turkey's digital transformation journey. Türk Telekom, which defines the customer as a strategic focus stakeholder aims to •Design and implement digital and end-to-end redesigned customer approach, • Have customer-oriented, agile working models, • Offer personalized offers and content as well as digital products and services to enrich the customer experience. Prioritizing customer processes in face-to-face and digital channels, Türk Telekom realizes continuous and sustainable improvements in operational efficiency with the projects it has signed. The Online Transactions application, which the Company offers in line with customer needs and expectations in order to maximize customer experience in digital areas as well, provides services with new functions, special opportunities for digital channels, a renewed user-friendly interface and simplified user login. With the vision of “One Channel, One Entry”, “Single Online Transactions”, the first digital joint online transactions channel combining mobile, home internet, home phone and TV products, was put into use and started to serve customers through a single digital channel. Focusing on end-to-end digitization of the individual and corporate customer experience, Türk Telekom focuses on issues such as effective customer management in individual channels, holistic channel, social media customer relationship management integration and artificial intelligence.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
Innovation, Entrepreneurship Türk Telekom works with the aim of strengthening the entrepreneurial ecosystem, offering innovative products and services to its customers by collaborating with startups, and developing sustainable development models for the country's economy. Founding the Ventures Project Development company in 2018, Türk Telekom aims to help start-up and mid-level startups achieve their long-term business goals, support their growth and develop projects. With this initiative, the company focuses on investments that will create added value by growing companies that will benefit large masses and support basic business lines in sectors such as health, energy, education, artificial intelligence, IoT and ICT. Providing cash support of more than 5.2 million TL to early stage technology startups with PILOT since 2013, Türk Telekom invests in Virasoft, which stands out with its artificial intelligence-based software and communication systems developed in 2020 and is Turkey's only domestic initiative in the field of digital pathology. Next Generation Cities Project The project aims to produce integrated solutions tailored to the needs of each city, thanks to an advanced urbanism approach and new technologies, and thus to serve sustainable society by saving resources. The system processes and interprets the data collected from different channels such as sensors and vehicles on the Türk Telekom IoT platform, enabling forward-looking decisions and effective use of public resources. As part of the New Generation Cities project, Türk Telekom builds sustainable and safe cities with a high quality of life for citizens and develops concepts in line with the understanding of new generation urbanism. With the New Generation City Management Platform, 55 different solutions in the new generation transportation, environment, health, security, life and energy verticals have become monitored and managed through a single interface from the operation centers. Next Generation Future project It was launched in 2018 in cooperation with the Habitat Association to accelerate Turkey's adaptation to the Industry 4.0 process, to support the growth of the software industry in Turkey, and to invest in young human resources that will produce smart technologies. 352 students from different departments applied with 88 projects to the "Smart Technologies IoT Hackathon" hosted by Information Technologies and Communications Authority (BTK) in February 2020 in Ankara.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Other, please specify (Transition towards circular economy)

Primary potential financial impact
Reduced direct costs

Company-specific description
Waste management strategies aiming to prevent the rapid consumption of natural resources and to transform the produced wastes from being a threat to the environment and human health into an input for the economy form the basis of the sustainable development approach. Türk Telekom carries out extensive studies on waste management within the scope of its sustainable environmental policy. In the process from production to disposal of all kinds of wastes that arise as a result of Türk Telekom's activities, prevention of direct or indirect release to the receiving environment in a way that harms human health and the environment, establishing technical and administrative standards in waste management, temporary storage, recycling and Shipping to disposal facilities are taken as a basis.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
Zero Waste Project Within the framework of sustainable development principles, the Zero Waste Project was initiated in Turkey in order to protect its resources, control waste, and leave a clean and developed Turkey and a livable world to future generations. Türk Telekom is among the institutions that voluntarily support the Zero Waste Project. Türk Telekom takes actions for the recycling of wastes in a way that does not harm the environment and in accordance with the standards and methods determined in the relevant regulations, and if it is not possible, for their disposal. According to the results obtained in 2018-2020 within the scope of the Zero Waste Project at Türk Telekom workplaces; • With the recycling of 26 tons of glass waste, 31 kilograms of raw materials were saved. • 5,780 trees were saved from being cut down by recycling 340 tons of waste paper. • With 13.7 tons of waste metal recycling, 18 kilograms of raw materials were saved. • 190 thousand 672 liters of oil were saved by recycling 77 tons of waste plastic. • 1107 cubic meters of storage space, 11 thousand 250 cubic meters of water, 1 million 848 thousand 485 kWh energy savings were achieved and 65 thousand 418 kilos of greenhouse gases were prevented from being released into the nature. Medical waste was sent to licensed disposal facilities, contributing to renewable energy production. Electronic Waste Collection Campaign According to the Waste Electrical and Electronic Equipment Control Regulation, manufacturers have targets to collect the electrical and electronic devices they put on the market as waste in specified amounts over the years. Türk Telekom continued the campaign to collect its modems in the market, which it started in 2017-2020, within the framework of its targets set in accordance with this legislation in order to raise awareness about the harm caused by electronic wastes to the environment, to reduce the damage by recycling these wastes in a healthy way, and to transform the obtained resource into value for Turkey. With this campaign, organized as a competition for Türk Telekom employees and their families, it is aimed to contribute to the future and sustainability of Turkey. In the last three years, 18 tons of electronic waste has been collected and recycled. With the income collected as a result of the Electronic Waste Collection Campaign, it contributed to the education of 55 children. The collected electronic waste revenues were donated to the Turkish Red Crescent.

Comment

Identifier
Opp4

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Shift in consumer preferences

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description
Türk Telekom focuses on providing equality of opportunity in its social responsibility activities by eliminating the economic, social or physical disadvantages in front of access to information with the opportunities offered by technology. Türk Telekom considers it its corporate responsibility to contribute to the access to information of all segments who cannot participate equally in social life due to economic, social, regional or physical reasons, and to contribute to the digital transformation of Turkey. Conducting its activities with the principle of "accessible communication for everyone", Türk Telekom has adopted the United Nations Sustainable Development Goals as its guide. The company carries out corporate social responsibility projects that add value to Turkey, especially within the framework of the objectives of "Quality Education" and "Eliminating Inequalities". Türk Telekom has signed many projects under the umbrella brand "Türkiye'ye Değer". Türk Telekom's social responsibility projects implemented with the approach of “One difference is worth it for Turkey” include Life is Easy with the Internet, Telephone Library, Daylight, Voice Steps, Daylight in My School, New Generation Future, Türk Telekom Schools, Türk Telekom Amateur Sports Clubs. Türk Telekom is aware that its stakeholders consist of very large groups. On this basis, it contributes to all segments of the society with its products and services as well as possible solutions and collaborations it can offer by listening to its stakeholders.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
Hedefi Olan Kadına İnternetle Hayat Kolay Project While women's participation in the workforce and employment is an important element of sustainable development, it is also important for ensuring continuity in economic growth, social development and full realization of social justice. The existence of a sustainable economy is possible with the full and equal participation of women and men in all areas of social life. In order not to alienate women from today's rapidly changing world, it is necessary to use information and communication technologies effectively and strengthen their digital skills. Türk Telekom, which serves the digital transformation of the country, in

collaboration with the Union of Chambers and Commodity Exchanges of Turkey (TOBB), United Nations Development Program (UNDP) and Habitat Association, in September 2019, shared women's knowledge on subjects such as information and communication technologies, e-services and e-commerce. It has implemented the project “Hedefi Olan Kadına İnternetle Hayat Kolay” is planned to introduce women with an idea or products they want to sell to the opportunities offered by online platforms and to improve their e-commerce knowledge. It is aimed to encourage and support women with entrepreneurial potential to participate in the production economy by increasing their ability to use information technologies and digital platforms effectively. With the project, it is aimed to introduce 'Digital Marketing' to 5,000 women in 81 provinces until June 2021. Digital marketing trainings are expected to increase women's knowledge and skills about marketing, digital marketing, market research, social media tools, advertising and payment systems. Design Thinking Workshops are organized with women who benefit from the trainings and make progress. With these workshops, women basically develop their skills of producing innovative solutions, rational and analytical research, user-oriented perspective and problem solving. In the continuation of the trainings and workshops, a certain number of women are given mentorship support to improve their business. Within the scope of the project, Digital Marketing trainings were given to 3,500 women at the end of 2020.

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization’s strategy and/or financial planning?

Yes

C3.1b

(C3.1b) Does your organization intend to publish a low-carbon transition plan in the next two years?

	Intention to publish a low-carbon transition plan	Intention to include the transition plan as a scheduled resolution item at Annual General Meetings (AGMs)	Comment
Row 1	Yes, in the next two years	Yes, we intend to include it as a scheduled AGM resolution item	

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

No, but we anticipate using qualitative and/or quantitative analysis in the next two years

C3.2b

(C3.2b) Why does your organization not use climate-related scenario analysis to inform its strategy?

We don’t do our analyzes in scenario analysis structure. However, in the preliminary evaluation of each technological decision we have made, we evaluate its possible impact on climate change. Especially in our infrastructure and energy investments decisions, calculations are made by adding parameters related to climate change to the feasibility studies.

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. There are risk definitions being made under "environmental risks". Through those risks we are preparing to analyse scenario analysis. Defined riks are used to determine which scenarios are feasible and acceptible for our operations. In addition, there are plans to use these risk definition and scenario analysis applications to determine Science Based Targets.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Türk Telekom offers low-carbon product and service solutions in the different sectors it serves through its subsidiaries and works to reduce greenhouse gas emissions. Greenhouse gas management and combating climate change are one of the most important issues for the company and are included in the overall strategy of the company.
Supply chain and/or value chain	Yes	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 renewable modem devices. Besides, by converting old technology products such as copper adsl cables into cutting-edge fiber cables; we ensure that the precious metals in old products are returned to the circular economy. There is always an allocated budget for supporting the development of such products and services and we keep innovating regarding the low-carbon ones.
Investment in R&D	Yes	To facilitate the low-carbon or even decarbonized future and markets, Türk Telekom invests in research and development and other innovative ideas widely. By learning from the positive environmental impact of our products and services, we keep ideating and prototyping new solutions which can make a difference throughout our value chain. There will be many more opportunities in this field and hence Türk Telekom allocates is predetermined budget for these activities. Turk Telekom aims to turn the side effects caused by climate change into opportunities through investments in renewable energy. With digitalization projects like smart cities, energy losses are prevented and emission generation is reduced.
Operations	Yes	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.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Capital allocation Access to capital	Being aware of climate risks, Türk Telekom allocates resources to related projects to invest in renewable energy resources. In addition, Turk Telekom provides the necessary conditions and receives support from green fund sources for its green investments. For example, like the green loan we got from the EBRD.

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

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 did not have an 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	Until the next reporting period, Türk Telekom aims to set strategic emission reduction targets for 5 and 10-year periods and to further reduce the carbon emissions that it can manage at the company scale. For this purpose, Türk Telekom will make investments to increase the rate of fiber infrastructure, which uses energy more efficiently than ADSL, among other important contributions. It will prepare its services for 5G technology. With Video Conferencing services, it will support the reduction of emissions from transportation.	Rather than direct emission targets there are targets set under "environmental goals" where different business units have climate related targets such as energy reduction, electricity reduction and optimization. These targets are determined according to the job description and operating field of different business units. Through these targets and risk determination processes emission targets can be planned and set in the upcoming reporting years.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number
Oth 1

Year target was set
2020

Target coverage
Company-wide

Target type: absolute or intensity
Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Waste management	metric tons of waste generated

Target denominator (intensity targets only)
<Not Applicable>

Base year
2020

Figure or percentage in base year
100

Target year
2023

Figure or percentage in target year
0

Figure or percentage in reporting year
100

% of target achieved [auto-calculated]
0

Target status in reporting year
Underway

Is this target part of an emissions target?
No, it is not part of an emissions target.

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain (including target coverage)
Within the framework of sustainable development principles, the Zero Waste Project was initiated in Turkey to protect its resources, control waste, and leave a clean and developed Turkey and a livable world to future generations. The project is aimed to be implemented gradually until 2023. Türk Telekom is among the institutions that voluntarily support the Zero Waste Project. According to the results obtained in 2018, 2019 and 2020 within the scope of the Zero Waste Project; • We saved 31 kilograms of raw materials by recycling 26 tons of glass waste. • We saved 5,780 trees from being cut down by recycling 340 tons of waste paper. • We saved 18 kilograms of raw materials by recycling 13.7 tons of waste metal. • We saved 190 thousand 672 liters of oil by recycling 77 tons of waste plastic. • We saved 1107 cubic meters of storage space, 11 thousand 250 cubic meters of water, 1 million 848 thousand 485 kWh of energy and prevented the release of 65 thousand 418 kilograms of greenhouse gases into the nature.

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	11214
Not to be implemented		

C4.3b

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

Initiative category & Initiative type

Other, please specify	Other, please specify (Energy efficiency: Processes (Next Gen Network Transformation))

Estimated annual CO2e savings (metric tonnes CO2e)
2970

Scope(s)
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
6200000

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 category & Initiative type

Energy efficiency in buildings	Other, please specify (Building services: Building Controls)

Estimated annual CO2e savings (metric tonnes CO2e)
1909

Scope(s)
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2000000

Investment required (unit currency – as specified in C0.4)
8400000

Payback period
1-3 years

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 category & Initiative type

Energy efficiency in buildings	Other, please specify (Building services: Building Controls)

Estimated annual CO2e savings (metric tonnes CO2e)
3535

Scope(s)
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
4000000

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

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 category & Initiative type

Energy efficiency in buildings	Other, please specify (Building fabric, Optimization of indoor space use)

Estimated annual CO2e savings (metric tonnes CO2e)
424

Scope(s)
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)
25000

Payback period
<1 year

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 category & Initiative type

Energy efficiency in buildings	Other, please specify (Building Services, Building Controls)

Estimated annual CO2e savings (metric tonnes CO2e)
2333

Scope(s)
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
4700000

Investment required (unit currency – as specified in C0.4)
3100000

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 category & Initiative type

Low-carbon energy generation	Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)
106

Scope(s)
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
70000

Investment required (unit currency – as specified in C0.4)
100000

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. In June 5th, we have signed a 6 year term 100 million loan agreement with EBRD (total cost LIBOR + 2.85%) to finance our investments on sustainability (such as energy efficiency).

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
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. 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. Withthese 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. In 2019, Türk Telekom added Smart Cities mobile app (in Artvin) and Smart Cities furniture (in Trabzon) to its portfolio. To facilitate the digital transformation of industral zones, Türk Telekom have started offering innovative and envrionment considerate technological solutions. Türk Telekom offers Smart Campus that include planning, security and life in campus solutions. Smart Campus were prestented to Turkish-German University board and smart lighting, irrigation and construction efforts were started.

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
2.12

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

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

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

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 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)
131691.1

Start date
<Not Applicable>

End date
<Not Applicable>

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
601634.9

Scope 2, market-based (if applicable)
601634.9

Start date
<Not Applicable>

End date
<Not Applicable>

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 gross global 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>

Please explain

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>

Please explain

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>

Please explain

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>

Please explain

Waste generated in operations

Evaluation status
Relevant, calculated

Metric tonnes CO2e
328.9

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

Please explain

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e
1720.5

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

Please explain

Employee commuting

Evaluation status
Relevant, calculated

Metric tonnes CO2e
3379.5

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

Please explain

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>

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

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e
652.6

Emissions calculation methodology
This downstream transportation and distribution calculations are performed for cargo operations.

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

Please explain

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>

Please explain
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>

Please explain
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>

Please explain
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>

Please explain
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>

Please explain
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>

Please explain
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>

Please explain
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>

Please explain
There is no other emission source in the downstream.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic 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
0.00002592

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
733326

Metric denominator
unit total revenue

Metric denominator: Unit total
28288875000

Scope 2 figure used
Location-based

% change from previous year
13.14

Direction of change
Decreased

Reason for change
Gross global combined Scope 1 and 2 emissions was 705,888.7 metric tons CO2e last year and unit toat revenue was 23,657,000,000 which made the intensity figure 0.00002984. Compared to last year, emission figures increased but the revenue increased which was more than enough to decrease our intensity.

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	131117.1	IPCC Fifth Assessment Report (AR5 – 20 year)
CH4	127	IPCC Fifth Assessment Report (AR5 – 20 year)
N2O	447.1	IPCC Fifth Assessment Report (AR5 – 20 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	131691.1

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	1312
Base stations	26264
Transmission lines	31974
Buildings	43018
Transportation	29033

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 for in Scope 2 market-based approach (MWh)
Turkey	61534.9	61534.9	1471313	2100

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 (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Data centers	44973	44973
Base stations	186096	186096
Transmission lines	357597	357597
Buildings	12970	12970

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?

Increased

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		<Not Applicable>		
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology	25165.3	Increased	3.56	In the previous report we have reported that we had 825,335.1 metric tons CO2e, due to our operations within Scope 1+2. However, due to the changesin emissions calculation methodology the corrected Scope 1+2 came out to be 705,888.7 tons of CO2e. Compared to the new emissions, this year this figure has increased to 731,054 tons of CO2e. lower carbon footprint and more which resulted in 94,301.1 tons CO2e decrease from previous year. Hence, an increase by 3.56% in our emissions was observed.
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 5% but less than or equal to 10%

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
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 (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	107347	107347
Consumption of purchased or acquired electricity	<Not Applicable>	2100	1621395	1621395
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	102571	102571
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	2100	1471313	1473413

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
122173

MWh fuel consumed for self-generation of electricity
19663

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>

Emission factor
2.6652

Unit
kg CO2e per m3

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

Comment
103,277 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
441

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat

441

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>

Emission factor
3.1265

Unit
kg CO2e per m3

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

Comment

Fuels (excluding feedstocks)
Natural Gas

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
56449

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
56449

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>

Emission factor
1.9422

Unit
kg CO2e per m3

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

Comment

Fuels (excluding feedstocks)
Other Petroleum Gas

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
26727

MWh fuel consumed for self-generation of electricity
22657

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>

Emission factor
2.23093

Unit
kg CO2e per m3

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

Comment

4,070 MWh is used for car fleet.

Fuels (excluding feedstocks)
Coal

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
3341

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
3341

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>

Emission factor
1.489

Unit
kg CO2e per m3

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

Comment

C8.2e

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

Sourcing method
Other, please specify (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

Country/area of consumption of low-carbon electricity, heat, steam or cooling
Turkey

MWh consumed accounted for at a zero emission factor
2100

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 emissions, and attach the relevant statements.

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
Turk Telekom CDP Assurance Report 2020 (Final).onay.pdf

Page/ section reference
The entire document.

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1b

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

Scope 2 approach
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
Turk Telekom CDP Assurance Report 2020 (Final).onay.pdf

Page/ section reference
The entire document.

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1c

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

Scope 3 category
Scope 3: Business travel

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
Turk Telekom CDP Assurance Report 2020 (Final).onay.pdf
Turk Telekom CDP_CC Assurance Report 2020.docx

Page/section reference
The entire document.

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Employee commuting

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
Turk Telekom CDP Assurance Report 2020 (Final).onay.pdf
Turk Telekom CDP_CC Assurance Report 2020.docx

Page/section reference
The entire document.

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

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?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	ISAE 3000 and ISAE 3410	Our energy consumption by source is independently assured by a third party consultancy group. The statement is attached. Turk Telekom CDP Assurance Report 2020 (Final).onay.pdf Turk Telekom CDP_CC Assurance Report 2020.docx

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 suppliers
Yes, our customers
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Compliance & onboarding

Details of engagement
Included climate change in supplier selection / management mechanism

% of suppliers by number
100

% total procurement spend (direct and indirect)
100

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement
Türk Telekom attaches importance to acting legally, ethically and honestly towards its suppliers and business partners, and to create a sense of trust in everyone with whom it has business relations. Its relations with its suppliers are carried out in accordance with the principles drawn by the purchasing policy. In this context Türk Telekom has developed a "Sustainable Procurement Approach". The purpose of the sustainable procurement approach is to ensure overall sustainability in purchasing activities and Türk Telekom Group activities. The responsibilities of the demand and purchasing units have been regulated with an understanding of increased efficiency, and an effective and lean purchasing structure has been designed, taking into account basic factors such as total cost of ownership, supply chain risks and sustainability.

Impact of engagement, including measures of success
Within the Sustainable Procurement Approach; • Utmost care is taken to fulfill the contractual obligations to suppliers in a timely manner. • All measures are taken and meticulously monitored to ensure that purchasing processes are carried out in accordance with the law and Company policies. • Supporting information regarding the Company's Purchasing Policies and Procedures is given to the suppliers throughout the year by the Purchasing Unit in line with its supplier relationship management responsibilities. • Necessary guidance is provided for suppliers to act in accordance with Türk Telekom's human rights, human resources, human health and environmental policies. • Within the scope of purchasing activities, competitors compete within the framework of legal and ethical rules. • It is ensured that the suppliers do not engage in attitudes and behaviors that will harm the brand value of Türk Telekom Group. • Suppliers are not burdened except for legal regulations and commercial practices.

Comment

C12.1b

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

Type of engagement
Collaboration & innovation

Details of engagement
Other, please specify (Transition to E-Invoice)

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Portfolio coverage (total or outstanding)
<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement
We support sustainability and takes initiatives with the perspective of preventing waste, which is a global problem, at its source. We aim to increase the rate of customers using e-invoice in line with this purpose, and organizes new campaigns to increase this rate. We are working towards increasing the number of customers who use e-invoice services. To this end we are taking initiative to help customers understand the direction this application is evolving, and we are organising campaigns to boost the number of customers transitioning to e-invoice. In addition, we have implemented a requirement of e-invoice membership to our "Sil Süpür" campaign in the mobile segment.

Impact of engagement, including measures of success
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. These efforts have saved; ・ 66 thousand trees, ・ 16 million kWh energy ・ 125 thousand m3 water in 2019.

Type of engagement
Collaboration & innovation

Details of engagement
Other, please specify (Transition to Digital Documentation)

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Portfolio coverage (total or outstanding)
<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement
In 2019, w have started the transition from hard copy documentation to digital documentation. In our branches, we started using tablets and biometric pens when we collect legal inormation from our customers rather than collecting it on paper.

Impact of engagement, including measures of success
This way: ・ We have made the legal paperwork process easier and more efficient. Which allowed branches to focus on customer satisfaction. ・ We have reduced the paper use and emissions emerging from cargo and courier logistics/transportation.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

We systematically reduce carbon emissions and continue our investments and optimization studies on energy efficiency without interruption. Solar energy systems have been installed in a total of 1,701 locations. We have a total installed capacity of 2.35 MW of renewable energy systems throughout Turkey and we aim to contribute to clean and national energy with these projects and to expand similar solar power plant applications in other suitable locations in Turkey. We aim to provide the highest level of resource savings and serve sustainable society by expanding the use of new generation communication technologies in energy, agriculture, industry, transportation, health, buildings and cities.

Within the framework of sustainable development principles, the Zero Waste Project was initiated in Turkey to protect its resources, control waste, and leave a clean and developed Turkey and a livable world to future generations. The project is aimed to be implemented gradually until 2023. Türk Telekom is among the institutions that voluntarily support the Zero Waste Project. According to the results obtained in 2018, 2019 and 2020 within the scope of the Zero Waste Project;
• We saved 31 kilograms of raw materials by recycling 26 tons of glass waste.
• We saved 5,780 trees from being cut down by recycling 340 tons of waste paper.
• We saved 18 kilograms of raw materials by recycling 13.7 tons of waste metal.
• We saved 190 thousand 672 liters of oil by recycling 77 tons of waste plastic.
• We saved 1107 cubic meters of storage space, 11 thousand 250 cubic meters of water, 1 million 848 thousand 485 kWh of energy and prevented the release of 65 thousand 418 kilograms of greenhouse gases into the nature.

We have launched the “E atıklarınızı Getirin, Yarınlara Daha Yeşil Bir Dünya Bırakın!” campaign in to raise awareness about the harm caused by electronic waste to the environment, to reduce the damage by recycling these wastes in a healthy way, and to transform the obtained resource into value for Turkey. We aimed to contribute to the future and sustainability of Turkey with this campaign, which was organized as a competition for Türk Telekom employees and their families. In the last three years, we have collected 18 tons of electronic waste and recycled it. Revenue collected as the result of the campaign contributed to the education of 55 children. In addition, we donated the collected electronic waste revenue to Türk Kızılay.

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 policy makers about climate change-related issues, especially, the enabling dimension of ICT sector. We became a member of Global e-Sustainability Initiative (GeSI) again after leaving our long time membership in the past 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. In addition, we have joined UN Global Compact to support human rights, working conditions, environment and corruption apliactions of UNGC and incorporated their 10 principles. We are working towards aligning our strategy and operations voluntarily. We will publish a progress report on how those 10 principles are being incorporated and utilized.

In addition we signed an important agreement before 5 June World Environment Day. We signed a 6-year loan agreement with the European Development Bank (EBRD) of 100 million USD with a total cost of LIBOR + 2.85%, in order to finance investments within the scope of sustainability, particularly in energy efficiency projects.

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.

We have developed our Human Rights Policy to act in accordance with human rights in our relations with our employees, customers, suppliers, business partners and all stakeholders of the company. While developing it, we took the United Nations Universal Declaration of Human Rights, the Constitution of the Republic of Turkey, the International Labor Organization Conventions approved by the Republic of Turkey and other conventions, and national legislation on human rights and working life as a basis. In addition, within the scope of the Corporate Governance Principles of the Capital Markets Board, we created a "Women Members Policy on the Board of Directors" in 2019to give priority to women in the selection of members to the Company's Board of Directors and to strengthen the position of women in the Company's top decision making mechanism.

In 2020, we published our 'Anti-Bribery and Anti-Corruption' policy. This policy has enabled us to clearly and clearly state our company's approach and commitments on bribe ry and corruption, to identify possible actions that can be considered in this context and to establish rules and responsibilities for their prevention, to raise awareness of our e mployees, to comply with national and international regulations, and to protect our integrity and reputation.

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
2020-faaliyet-raporu.pdf

Page/Section reference
Starting from page 154 Türk Telekom's strategy, approach and applications are showcased.

Content elements
Governance
Strategy
Other metrics

Comment

C15. 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.

C15.1

(C15.1) 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

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

Please confirm below
I have read and accept the applicable Terms