ARÇELİK A.Ş. - Climate Change 2022

C0. Introduction

C0.1

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

Arçelik, founded in 1955,has operations in the consumer durables and electronics sector with production, marketing, and after-sales services. With over 40,000 employees, 12 subsidiaries in 51 countries, and 28 production facilities in 9 countries (Turkey,Romania,Russia,S.Africa,Thailand,India,Pakistan,Bangladesh,China), we offer products and services to many different regions of the world. It has 16 R&D and Design Centers in Turkey, 13 R&D Offices across 9 countries. Arçelik's management provides its commitment to present future environmental and social issues with its announced vision "Respecting the World,Respected Worldwide".With its sustainability approach parallel to its vision and UN Sustainable Development Goals,Arçelik aims to develop and market resource and energy-efficient products,innovative in design,easy to use, while fulfilling its commitment to work on solutions against future threats such as drought,global warming or natural resource depletion.Arçelik conducts its business in accordance with ISO14001 EMS which is integrated with ISO9001.In 2010, Arçelik established GHG Management System based on continuous improvement principles.Arçelik calculated the GHG emissions sourced by its facilities in accordance with ISO 14064-1 Std.Arçelik's GHG emissions (Scope 1&2) were audited and verified by an independent body in "100% verification" and reasonable assurance level.Since 2013,Arçelik's Scope 3 emission from domestic logistics was calculated and verified by third party.In 2019 Arçelik succeeded transition to ISO 14064-1:2018 Std. in Turkey operations and calculated its Scope 3 emissions include purchased goods, business travel, employee commuting, treatment of waste, wastewater generated in production and packaging waste of sold products, use of sold products, downstream transportation and end of life treatment.In 2012,Arçelik established ISO 50001 Energy Management System.10 of Arçelik's production plants achieved a "Platinum" certificate for energy efficiency.Arçelik values sustainable procurement of raw materials, sustainable design of each product,and low impact production. It put great importance on increasing product recyclability and lowering end consumer resource consumption to contribute to the transition to low carbon economy,announced a 350 million Euro Green Bond issuance in 2021,and prepared Green Financing Framework including our low-carbon transition plans.Arçelik became carbon-neutral in its global manufacturing operations (Scope 1&2) in 2019 and 2020, with its own carbon credit generated by its own carbon financing project. Arçelik's science-based targets to reduce Scope 1&2&3 emissions have been approved by SBTi. From a 2018 base year, Arçelik committed to reduce its absolute Scope 1-2 emissions by 30% by 2030; and its absolute Scope 3 emissions from the use of sold products by 15% within the same time frame. Being one of the supporters of the TCFD, Arçelik has an integrated approach to monitor, measure and manage the ESG risks and the impact on the financials. Arçelik participates in national and international initiatives to combat climate change and achieves practices that set an example for all of its value chain.Pioneering its sector on a global scale in combating climate change, Arçelik participates in climate conferences and shares its experiences since COP17. Arçelik's CEO is a commissionaire of the High-Level Commission on Carbon Pricing and Competitiveness.Arçelik is the only Turkish company in this commission. Arçelik's CEO also attended to "Dialogue for Climate Action" event launched by the World Bank.Arçelik became the company with the highest score (2021 S&P Global Corporate Sustainability Assessment - 86/100) in the Durable Home Appliances Category for the 3rd time in the Dow Jones Sustainability Index.The company is the first and only Turkish industrial corporation listed on the Dow Jones Sustainability Index for five consecutive years. Arçelik has become one of the first 45 companies in the world entitled to receive the Terra Carta Seal, presented by the UK's Prince of Wales to companies that have committed to combating climate change with concrete objectives within the scope of the Sustainable Markets Initiative, and is the first and only company in its sector to receive this honor.Arçelik has been constantly rated AAA on MSCI Sustainability Index since 2016, listed in the FTSE4Good Emerging Markets Index since 2016. Arçelik is among the companies listed in the BIST SI since 2014. At the European Business Awards for the Environment organized by the European Commission, Arçelik was awarded the 1st prize in the Management category, becoming the 1stTurkish company to win this award in our industry. In 2017, Arçelik received the "A performance score" in both CDP Climate and CDP Water and entered in the Global A List in both programs, as one of the 25 companies in the world which achieved this. In CDP Climate,Arçelik has awarded with A- score between 2018-2021.

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 2021	December 31 2021	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.

Bangladesh
China
India
Pakistan
Romania
Russian Federation
South Africa
Thailand
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

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	ARCLK

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
Director on board	Arçelik's board-level oversight for sustainability&climate change issues belongs to a member of the Board of Directors. Arçelik Sustainability Council (SC) is responsible for the management of sustainability&climate change issues. The Sustainability Council, that is chaired by the CFO and includes members from senior management (including COO, CFO, Assistant General Manager-Turkey Trade, Finance Director, Strategic Planning Director, Human Resources Director, Customer Services Director, Global Communications Director, Quality, Sustainability and Corporate Affairs Director), determines policies and strategies concerning the corporate sustainability and climate crisis, integrate such strategies into business processes and monitor Arçelik's sustainability performance, ensuring that the decisions made regarding the climate crisis and other ESG related risks and opportunities are widely implemented. A number of working groups report to the SC which meets quarterly. Due to CFO reports critical issues regarding studies of SC including climate change to an assigned member of the Board of Directors, the Director on Board has been selected as board oversight for climate change issues. Climate change is one of the priority agenda items of the Board of Directors' investment and company strategy meetings. The assigned member of the Board of Directors informs the Board of Directors about studies of SC on climate change. As an example of a decision made by the Board of Directors; Arçelik's science-based targets and net-zero commitment in 2050 have been submitted to SBTi after it was approved in the meeting.

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 strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	Climate-related issues are one of the priority agenda item of Board of Directors' investment and company strategy meetings.
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	Climate-related issues are one of the priority agenda items of Sustainability Council meetings cheered by the CFO.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	Two members of Arçelik's Board of Directors (BoD), President of the Consumer Durables Group at Koç Holding and CEO of Arçelik, have competence on climate change issues.President of the Consumer Durables has been appointed based on a BoD Decision to inform the BoD on sustainability-related risks and opportunities. The same Board Member also sits on the Risk Committee and regularly gets informed on the climate-related risks and opportunities as well as investment needs on Arçelik's journey to net zero as of 2050. Also the Arçelik CFO, the said Board member has high expertise in climate strategy and climate-related risks. The said Board Member also chairs Turkish Industry&Business Association Investment Environment and Industry Policies Roundtables. The Quality, Sustainability and Corporate Affairs (QSCA) Director of Arçelik, chairs the Turkish Inustry & Business Association Environment and Climate Change Working Group and regularly reports all climate change-related issues including but not limited to the EU Green Deal, Carbon Border Adjustment Mechanism, carbon pricing, carbon credits market and renewable energy investment.The QSCA Director directly reports to the CEO and the climate-related issues.The CEO is also a natural member of the Sustainability Council which gathers quarterly during a year. There, the strategic risks and opportunities related to climate issues are discussed in detail. The decisions taken on the SC are reported to the President of Consumer Durables.Both Board members are regularly and thoroughly informed on the risks associated with the transition to a low carbon economy in terms of both transition and adaptation risks. The transition-related risks the CEO is periodically informed of includes the risk of increases in the price of carbon, the costs associated with the SBTs of the Company, the costs and opportunities associated with investments in renewable energies as well as renewable energy as a new business line in Turkey operations.Arçelik's CEO is a high commissioner on the Carbon Pricing Leadership Coalition under the auspices of the World Bank. He is also a climate activist himself, having summited Mount Everest to raise awareness of climate change. He is also a member of the WEF Alliance of CEO Climate Leaders Group. He has also been selected as the Pacific U.S. Regional Honoree for the 2021 YPO Global Impact Award for this contribution to putting sustainability as a business model at the heart of the organization.	<Not Applicable>	<Not Applicable>

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
Chief Financial Officer (CFO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

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).

Arçelik's sustainability approach is to consider social, economic, environmental, and ethical aspects into its activities, to integrate these aspects into its corporate business targets, to manage its activities in accordance with sustainability principles, corporate policies, and strategies. Arçelik assesses sustainability and climate change-related risks and opportunities and stakeholder expectations as its main inputs.

(i)The highest level of the direct responsibility of sustainability and climate change efforts is CFO, the Head of Sustainability Council.

(ii)Arçelik Sustainability Council is comprised of the full executive board, including the COO (Chief Operations (Production & Technology) Officer), CSO (Chief Strategy & Digital Officer), CCO, CMO, Finance Director, Strategic Planning Director, Human Resources Director, Customer Services Director, Global Communications Director, Quality, Sustainability and Corporate Affairs Director, Global Customer Care Director, R&D Director, Purchasing Director.

The head of the Sustainability Council is CFO and the General Secretariat of the council is the Quality, Sustainability, and Corporate Affairs Director. The Sustainability Council meets quarterly.

Duties and responsibilities of the Sustainability Council are:

•Specifying the corporate policies and strategies about corporate sustainability principles and climate change

•Following the consolidation of corporate business process with specified sustainability and climate change policies and strategies, provide integration to corporate business targets

•Evaluating corporate risks and opportunities in scope of sustainability principles and policies, make strategic decisions, and manage prior risks and opportunities

•Identifying KPIs and targets of sustainability and climate change-related issues

•Following the global developments on sustainability and climate change issues, to build the company strategies according to these developments

•Encouraging collaboration with NGOs, public enterprises, universities on sustainability and climate change issues

•Defining the strategic framework and decisions of the external sustainability assessment and rating tools (CDP, DJSI, MSCI, BIST SI, etc.) and follow up the results

The sustainability working groups are established to control and coordinate the sustainability and climate change implementations. The members of sustainability working groups consist of specialists and/or managers responsible for sustainability issues. These groups report to the Sustainability Council members.

Arçelik Sustainability Working Groups (WG) are; Environmental, Energy, Green Chemistry, Climate Change, Sustainable Supply Chain, and Occupational Health & Safety WG. The strategies and goals of the Council are examined and implemented by the Climate Change Working Group which consists of the Director of Quality, Sustainability and Corporate Affairs, the Managers of the Environment and Energy, Environment and Energy Specialists, and Production Managers.

Duties and responsibilities of sustainability working groups are:

•Providing conformity of all activities in sustainability working groups to corporate strategy, policy, and sustainability principles.

•Implementing decisions of the Sustainability Council.

•Implementing sustainability as the main strategy in related processes

•Developing and reporting proactive solutions for the company's sustainability and climate change-related risks and opportunities, share best practices

•Preparing and/or coordinate action plans for sustainability and climate change targets, follow the progress against targets, reporting performance monitoring, and KPI results.

Arçelik's Sustainability Council and the Climate Change WG identify policies and strategies regarding sustainability and the climate crisis, from which we establish collaborations, ensure that decisions taken are implemented, and track performances to make sure targets are met. All work carried out in sustainability is regularly reported to the member of the Board of Directors, Koç Holding Head of Durable Consumer Goods Group, who gives a report to the Board of Directors every four months. These reports are discussed and finalized by the Board of Directors.

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	Arçelik provides incentives in different categories for all employees including C-level to increase motivation, participation, success, and productivity in the management of climate-related issues, and raise awareness.

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 incentivized	Comment
All employees	Monetary reward	Other (please specify) (Environment, energy, climate and society projects)	In order to increase motivation,success and productivity of its employees and to materialize best practices and ensure their dissemination;Arçelik evaluates,rewards and ensures promotion within the company to all success,invention and suggestions that provide benefit. In this context,since 2005 Human Resources Dept. of Arçelik has been implementing an "Pyramid Climbers Awards" annually. All employees who are successful are encouraged and rewarded. One category of this award process is "Environment and Society Contributors". Projects nominated in this category are evaluated and concluded according to the following performance indicators: 1. To produce higher efficient solutions and/or products that reduce greenhouse gas emissions with spending less energy and source by environmentally friendly activities 2. To develop projects that would contribute to the society lived and worked in with the perspective of social responsibility 3. To set an example in/out of company with studies and make an effort for sustainability and dissemination of studies. Environmentally friendly activities for product and production with energy efficiency projects are evaluated under this reward process.Rewardable projects and solutions are announced within the company and the project owners are rewarded in "Pyramid Climbers Award Ceremony" annually. Arçelik develops environmental friendly,innovative and technological products which increase life standards of customers with R&D employees. R&D Department collects creative and innovative ideas of employees through a suggestion system called "Inter", an evaluation board evaluates suggestions and projects design opportunity is created for ideas that may be transformed into a product. In the name of encouraging employees for creativity,to ensure announcement of creative ideas within the company and to reward owners of such ideas "Invention Award Ceremony" is organized on World Patent Day (on April) every year. By using TPM tools,our white and blue collar employees develop projects on subjects like environment,energy and climate change and such projects are identified at individual performance scorecards of employees.Employees receive individual performance points in consideration of TPM activities they perform and they are rewarded at year-end in response to these points by using tools like a situational reward.
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction project Emissions reduction target	Progress of Arçelik's science-based targets is located in the CEO's scorecard.
Chief Operating Officer (COO)	Monetary reward	Energy reduction target	Energy reduction ratio (thus carbon emissions reduction) KPI is part of the COO's scorecard.
Other C-Suite Officer	Monetary reward	Emissions reduction target Energy reduction project Energy reduction target Company performance against a climate-related sustainability index	Energy reduction ratio (thus carbon emissions reduction) KPI, energy reduction projects and increasing Arçelik's performance in the climate-related sustainability indices are parts of the Quality, Sustainability and Corporate Affairs Director's, who is directly reporting to the CEO, scorecard.
Other, please specify (Energy and Environment Managers)	Monetary reward	Energy reduction project Energy reduction target Company performance against a climate-related sustainability index	Energy reduction ratio (thus carbon emissions reduction) KPI, energy reduction projects, progress of Arçelik's science-based target commitments, and/or increasing Arçelik's performance in the climate-related sustainability indices are parts of the Energy and Environment Managers' scorecards.
Other, please specify (White and blue collar employees)	Monetary reward	Energy reduction project Energy reduction target Company performance against a climate-related sustainability index	Energy reduction ratio (thus carbon emissions reduction) KPI and energy reduction projects, Arçelik's science-based target commitments, and/or increasing Arçelik's performance in the climate-related sustainability indices are parts of related employees' scorecards.

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	3	The short-term is determined as 0-3 years time horizon in the context of climate-related risks and opportunities in Arçelik.
Medium-term	3	10	The medium-term is determined as 3-10 years time horizon in the context of climate-related risks and opportunities in Arçelik.
Long-term	10	30	The long-term is determined as 10-30 years time horizon in the context of climate-related risks and opportunities in Arçelik.

C2.1b

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

Arçelik Enterprise Risk Management (ERM) balances company risks and the execution of corporate goals and strategies while matching strategies and goals with associated risks. In this process, the best global practices are followed, such as the IS0 31000 Risk Management Standard and the COSO Enterprise Risk Management Integrated Framework are utilized and a hybrid framework is developed that best suits the Arçelik ERM methodology. All identified risks are prioritized based on risk scores, financial impact metrics, and so on. Hence, the risks that require immediate attention are determined and risk management is performed on each function and operation to integrate the risk management strategy into the senior management's decision-making mechanism. Risk management activities also focus on raising employee awareness about risks and encouraging them to think about and report potential risks through the risk proposal system. In consideration of environmental, social and governance (ESG) risks, ERM fosters climate change awareness, promotes occupational health and safety practices, and instills Arçelik's corporate culture. It participates in risk management projects by regularly exchanging information with company units to monitor such risks. The ERM Directorate under the Assistant General Manager of Finance and Accounting ensures the management, coordination and surveillance of risks that may affect the company by means of the risk management system it established and reports to the Risk Management Committee (RMC). The RMC reports to the Board of Directors, identifying risks early and taking necessary actions to mitigate and manage those risks. ERM is integrated with all business processes in production facilities, headquarter units and international subsidiaries, and affects the performance evaluation process of the risk owners. Being one of the supporters of the TCFD, Arçelik has an integrated approach that enables it to monitor, measure and manage the ESG risks and the impact on the financials. Arçelik has a solid ESG risk management structure thanks to the mutual efforts of the Sustainability and ERM teams. Enterprise risk management, sustainability working groups and related business units work in collaboration while identifying and assessing the risks of climate change and other ESG issues in line with our strategy and targets. Risks such as destructive natural events caused by rising temperatures, additional costs such as taxes on carbon and GHG emissions, and regulatory changes like EU's carbon border adjustment mechanism and shifting customer demand to more energy-efficient products are embedded into the risk management system and mitigation actions are incorporated into business processes. Arçelik has also received a third-party service to apply a physical and transition risk scenario analysis to identify the long-term potential impacts of the climate crisis. Arçelik publicly discloses its climate-related risks and opportunities related to the transition to a low carbon economy in terms of the policy, physical, market, reputation, and technology risks. The outcome of the analysis is embedded in the ERM system's financial risks reporting structure.

In Arçelik, Risk Management System is an integrated multi-disciplinary process. Strategic, operational, physical, financial, reputational, and environmental risks and opportunities are covered in Arçelik Risk Management System to the fulfillment of the short, medium, and long-term goals. Each year climate-related risks and opportunities are assessed and audited by the internal and external integrated systems' (ISO14001&ISO50001&ISO14064-1) audit experts in site audits. According to Arçelik's risk and opportunity scoring methodology; the risks and opportunities are scored (1-5 points) considering financial, reputation, production, operational, human, and legal impacts and the maximum score is defined as an impact point. All risks are evaluated according to impact and frequency criteria. The frequency of the risks and opportunities are also scored (1-5 points). The risk (R) and opportunity (O) points are scored by multiplying frequency (F) and impact point (I) for prioritization (R, O=F*I).

For scoring financial impact, Arçelik risk tolerance level should be considered. Risk tolerance can be defined as an appropriate level of financial loss that does not have a significant impact on the company. In Arçelik the substantive financial impact is related to Arçelik risk tolerance level and is defined according to financial loss before tax. Less than 750K Euro is not considered a substantive financial impact and costs more than 15 million EUR are considered as extremely substantive.

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
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
In Arçelik, Risk Management System is an integrated multi-disciplinary process. Strategic, operational, physical, financial, reputational, and environmental risks and opportunities are covered in Arçelik Risk Management System to the fulfillment of the short, medium, and long term goals. Company-level risks are mainly strategic and reputational risks that affect the whole company and stakeholders. Asset level risks are mainly operational, financial, physical, and environmental risks which effect especially production plants, sales, purchasing, distribution, and production engineering departments. Chaired by the CFO, the Sustainability Council is responsible for identifying, determining, and evaluating climate crisis policies and strategies according to risks and opportunities. Corporate climate change risks and opportunities are presented by the Sustainability Council to Risk Management Committee for providing the integrity of corporate main risks. Risk Management Committee is formed to carry out its activities by making recommendations to the Board of Directors concerning determination and evaluation of risks and opportunities, estimation of their impacts to the company level, management of these risks, their consideration in decision-making mechanism, and establishment of effective internal control systems. Risk Management Committee integrates the climate change-related risks and opportunities into the main risks and opportunities of the company. In this context, the Risk Management Committee meets 6 times a year to monitor and assess the risks. Climate-related risks and opportunities are being scored and prioritized by the Sustainability Council. Defined and prioritized asset and company level climate change-related risks&opportunities are notified of the prioritized risk, and opportunity results are monitored and assessed by the Board of Directors. Arçelik Sustainability Council members are the top-level responsible for business processes. Related department managers develop proactive solutions to handle risks and opportunities and integrate into the business procedures. Plant directors are responsible to monitor and ensure that the risks are under control and opportunities are being assessed. The management process of climate change risks and opportunities is defined in Sustainability Management Procedure. Risk and opportunity identification, determination, and prioritization methods have been defined and published in the Arçelik Enterprise Risk Management

Governance Manual. Each year climate change-related risks and opportunities are being assessed and audited by the internal and external integrated systems' (ISO 14001&50001&14064-1) audit experts in site audits. According to Arçelik's risk and opportunity scoring methodology; the risks and opportunities are scored (1-5 points) considering financial, reputation, production, operational, human, and legal impacts and the maximum score is defined as the impact point. All risks are evaluated according to impact and frequency criteria. For scoring financial impact, Arçelik risk tolerance level should be considered. Risk tolerance can be defined as an appropriate level of financial loss that does not have a significant impact on the company. In Arçelik the substantive financial impact is related to Arçelik risk tolerance level and is defined according to financial loss before tax. Less than 750K Euro is not considered as a substantive financial impact.The frequency of the risks and opportunities are also scored (1-5 points). The risk (R) and opportunity (O) points are scored by multiplying frequency (F) and impact point (I) for prioritization (R, O=F*I). In consideration of Arçelik's product life cycle approach, GHG emissions emitted during to use-phase of the products have the highest contribution to carbon footprint in the product life cycle. Therefore, product use is an important step in our downstream activities for risk assessment. Arçelik's R&D Department carries out studies on the development of innovative and energy-efficient products that contribute to a low-carbon economy. The most energy-using household products that are of the most energy efficiency class(es) on the energy label are considered low carbon and climate-friendly solutions. Another risky point in downstream activities is Waste Electrical and Electronic Equipment. According to the Turkish Regulation on the Control of Waste Electrical and Electronic Equipment, producers are responsible for financing the costs of the collection, treatment, recovery, and environmentally sound disposal of WEEE from private households after collection points and distributors. To manage this risk, Arçelik established two WEEE recycling facilities to treat the products at their end of life stages. Refrigerators and other cooling appliances containing Chlorofluorocarbons (CFCs) are environmentally recycled. Take-back campaigns are organized to collect old and inefficient appliances from consumers, to recycle and reuse products as resources, or return them to nature. The goal of the campaigns is to replace the old products with new environmentally friendly products (with more energy and water efficient, that have low GWP gas ones, etc.). Between the years of 2014-2021, the energy-saving as a result of the recycling processes within the two plants is 397 GWh. Between the years of 2014-2021, approximately 195,000 tons of CO2e emission was prevented by replacing the old technology with new environmentally friendly products. Additionally, in the context of direct operations and downstream activities, Scope 1&2 emissions and Scope 3 emissions generated by product logistics, use of sold products, treatment of packaging, and end-of life treatment of Arçelik's sold products are calculated in accordance with ISO 14064-1 standard and verified by an independent accredited institution. Scope 1+2 emissions generated in 2021 in Arçelik operations have been calculated and verified as 130,397 tCO2e, and Scope 3 downstream emissions from activities mentioned above as 23,087,984 tCO2e. E.g. some of the high potential risks can be found below: Risk1: International agreements, legal legislations, air emission, and climate change limitations Risk factor1: Additional investment need; needs for using Best Available Technology (BAT); energy cost increases; national GHG mitigation target; the necessity for buying carbon credits Risk2: Responsibilities of Emission Reporting Risk factor2: Failure to obtain GHG emission factors from energy suppliers Risk3: Product labeling regulations and standards Risk factor3: Inability to capture the competition of using voluntary labels (water label, carbon label, eco-label, etc.) except for energy E.g. one of the high potential opportunities can be found below: Opportunity1: International agreements, legal legislations, air emission, and climate change limitations Opportunity Factor1: Voluntary reporting of GHG emissions

Value chain stage(s) covered
Upstream

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

Frequency of assessment
Annually

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

Description of process
Considering that our supply chain extends worldwide, we have a significant impact area. To ensure the continuity in the supply of products and improve our suppliers' environmental (including energy and climate change performance) and social performances, we work together to create value for all our stakeholders in our value chain. We make our purchasing operations sustainable using risk management processes, sustainable supplier indexes, supplier audits, communication events, and supplier training. We have been organizing Supplier Days since 2011 to strengthen communication with our suppliers and to share our strategy, purchasing policies, and expectations. At Arçelik, we conduct supplier sustainability risk assessment as a Supplier Sustainability Data Monitoring&Development Project in collaboration with a third-party firm. This assessment is made to critical suppliers which are amongst the 90% of purchasing volume significant impact on company operations in terms of high purchasing volume, critical components provided, or being nonsubstitutable. We require all newly commissioned suppliers to conduct self-evaluation audits on quality, environment, and business ethics. We have approx. 2,000 (direct) suppliers in more than 60 countries. We have 364 critical Tier 1 suppliers (which represents 78% of purchasing volume). We have started to collect data from suppliers to measure and manage their impact on the company's operations. This process incentivizes them to report their climate-related data. As of 2025, we have committed to collecting environmental data such as GHG emissions, energy and water consumption data, etc. for approx. 400 of our suppliers, corresponding to 90% of our purchasing volume. We intend to make the consolidated data public to transparently report the impact of our supply chain. In 2021, a total of 215 critical suppliers have been audited, we collected environmental data from 151 suppliers. The quantitative environmental data collection part is important to emphasize our rationale behind this effort. Having committed to NetZero 2050 targets within the entire value chain, supply chain decarbonization is critical. In 2021, a long-term environmental target commitment was received from 183 suppliers to set GHG emission/water/waste/energy efficiency targets. Assessment comprises ESG questions including environmental reporting, EMS, compliance with legislation, monitoring (e.g. GHG emissions, energy and water consumption data etc.), environmental voluntary activities. Each question has a point and weight. The sustainability risk levels of the suppliers are determined as high, medium, acceptable, good, and excellent. The third-party firm provides us with the supplier data monitoring software platform and works in close collaboration with the suppliers, acting as an advisor for the questions raised by the suppliers. The aim is to understand our suppliers' ESG-related risks and opportunities by collecting and analyzing their data. Our main intention is to enable Scope 3 reduction in the value chain. In 2021, we collected environmental data from 151 suppliers, reaching 38% of our target. Based on the results,if a Supplier scores 24 or less,it means that the supplier is classified as a "high risk" supplier. We take action according to the type of risk detected, Third-party audit findings also help identify high-risk suppliers.If the supplier fails to reach the "Acceptable level" within the maximum of 12 months of the plans' launch, Arçelik reserves the right to cancel the contract. The action plan is approved by the partner.If the actions taken are suitable, the supplier score is revised by the partner. In 2021, the number of suppliers classified as high-risk is 24, its percentage of total suppliers in that category is % 1.19. As per our Global Responsible Purchasing Policy, we audit our suppliers in terms of compliance with the Code of Conduct. Audits check whether our suppliers comply with Arçelik's expectations in areas including compliance with laws, working conditions, human rights, occupational health and safety, and the environment. We see supplier training as one of the most important areas in the development of our suppliers. Therefore, we established the Supplier Training Platform to inform our suppliers about sustainability practices, and to provide details on national and international regulations. We provide training in sustainability, energy management, environmental management and environmental legislation, chemical management, zero waste management, business ethics, and working conditions, as well as occupational safety. We set our responsible supply chain targets, related to climate change in 2023, 2025, and 2030 as follow: - Ensure our suppliers* apply for ISO 14001 certification by 2023 -Ensure suppliers* exceeding 1000 ToE obtain the ISO 50001 certificate by 2025 -Ensure suppliers* exceeding 500 ToE obtain the ISO 50001 certificate by 2030 -Collect, monitor, and publicly disclose compiled data of supplier's* Scope 1–2 GHG emissions, energy, water, and waste and encourage them to set their own targets by 2025. *Approximately 400 suppliers, making 90% of our purchasing volume To date, 183 suppliers have signed the Commitment Letter. In 2021, 77 % of all critical suppliers have ISO 14001 certificates. Additionally, we calculate GHG emissions of upstream activities including purchased goods and services, treatment of waste generated in production, business travel, and employee commuting. We evaluate the GHG amounts yearly and work on reducing our carbon footprint from upstream activities. As an example, we have a target to increase recycled plastic content to 40% and bio-based material content to 5% by 2030 which will help us to reduce virgin raw material consumption, so GHG emissions.

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	According to "The Regulation on Monitoring of GHG Emissions" entered into force by publication in Official Journal on 25 April 2012 with no. 28274, approved GHG emission reports should be prepared and sent to the Ministry of Environment and Urbanization every year. Under this regulation, the first reporting obligation period for the industry has been started in 2017 for GHG emissions of 2015 and 2016. 2 of Arçelik's production plants (Washing Machine and Refrigerator) are in the scope of this regulation. GHG Monitoring Plans of these 2 production plants were prepared and sent to the Ministry. The plans were approved by the Ministry. Continuously, in 2020, Arçelik's 2019 GHG reports were audited and verified by the licensed auditor company. To manage the risk, Arçelik has calculated greenhouse gas emissions released during its activities since 2006. In 2010, Arçelik established Greenhouse Gas (GHG) Management and Reporting System, before the regulation publishing date. Arçelik calculated the Scope 1, Scope 2 and Scope 3 GHG emissions sourced by its activities by using IPCC-2006 (and 2019 refinement) and in accordance with ISO 14064 GHG Standard. Since 2010, Arçelik's GHG values have been audited and verified by an independent body in "100% verification" and "reasonable assurance" level. So, Arçelik's related plants (which are in the scope of the Turkish GHG regulation) were prepared for the regulation. These plants prepared the monitoring plans and renewed their systems in accordance with the Turkish GHG Regulation.
Emerging regulation	Relevant, always included	Turkey became a party to Kyoto Protocol on 26 August 2009. However, Turkey was not included in the Protocol Annex-B list which contains Annex-I signatory countries. Accordingly, Turkey has no numerical limit or reduction target in the first obligation phase which covers 2008 to 2012 of the Protocol. However, in Paris COP21, Turkey signed the Paris Agreement and submit its NDC plan to the UN Secretariat. According to the NDC, Turkey's target is to reduce 21% of its emissions according to business as usual scenario by 2030. However, this target has not been allocated to the sectors yet. For this reason, the financial implications that would become from the mitigation costs cannot be estimated and calculated. This is a grey area for Turkey and our sector. To manage the risk, as Arçelik, we have annual energy consumption reduction targets, renewable energy power plant establishment target, science-based and net-zero emission targets. Arçelik's Sustainability Council contributes these targets every year for increasing energy efficiency in production and using electricity produced by renewable energy sources (RES) to reduce Scope 2 GHG emissions. With energy efficiency projects in Arçelik Global production plants in the last 12 years (2010-21), it has been saved nearly 1.4 Million GJ energy with 2,542 projects. Around 134,000 tCO2e emissions have been prevented since 2010. Arçelik, starting from 2012, has been using green electricity, the supply rate of green electricity in Arçelik Global has reached 69% as of 2021.
Technology	Relevant, always included	For the post-2012 period, Turkey has been signed the Paris Agreement in COP21 and submitted its NDC plan which includes the reduction target to the UN Secretariat. However, it is still not clarified how this target is distributed to sectors. In the case of the designation of GHG reduction target, companies would be required to adapt in a short period of time and fully comply with targets. In order to be ready for this, requirements to implement additional operational activities and/or BAT (Best Available Technologies) will arise; additional cost and investments shall be required. If sector/company targets may not be achieved, the requirement for carbon purchase will arise; this would affect costs significantly in turn. This may cause an impact on company share certificates before investors. When it is needed to reflect operational and investment cost increase to product price, we may have a disadvantage in competition. To manage this risk, most of the production processes of Arçelik production plants comply with IPPC and BAT documents. As an example; nanotechnology processes are implemented in production. The integration process for introducing "Environmentally Friendly Nanotechnology Product" has been using for the entire plants to reduce the use of pre-treatment chemicals and energy during the surface finishing before the implementation of metal sheets powder coating. Thanks to this product, the related process is completed at 25°C instead of 50-55°C hence a significant level of energy is saved while the process. Also, phosphate sludge generation from the coating process has been canceled. As an example of this implementation; in our dishwasher plant, the nanotechnology surface treatment process is being used in the production process since 2012. This technology provides less natural gas consumption (35053 m3/year reductions) and less GHG emission emitting (70 tCO2e/year reduction). Thanks to this transition, our dishwasher plant has been selected as "Best Available Technology (BAT) using plant" by T.R. Ministry of Environment and Urbanization. In addition, the powder dye coating transition has been implemented in Arçelik plants. And this transition reduced VOC (volatile organic compound). Arçelik attaches to environmental management is supported with investments on the relevant subjects in the term of employment. In this regard, TRY 6.98 million EUR were allocated to environmental protection and investment expenditures in 2020.
Legal	Relevant, always included	Besides uncertainties regarding the reduction of greenhouse gas emissions, another subject that may cause a problem at the international competition is legal requirements related to energy. Operational costs are directly impacted by the variable prices in the world. The energy prices are being dependent on the global changes since Turkey is foreign-dependent in energy, intensification of general tax approach on energy sources, electricity generation from renewable energy sources is not an adequate level. With new legal requirements, it is highly probable that electricity and natural gas costs increase to extend that may cause problems in competition. To manage the risk, energy consumption per product is followed in "kWh/product", "m3/product" and reported in Arçelik's production plants. In the light of data, obtained projections are made and short, medium, and long term targets are determined. We determine the energy consumption levels at all the stages of our production processes, query energy efficiency through periodical analyses, identify areas open to improvement, and design and realize projects that will increase energy efficiency in production. In addition to that, developments regarding renewable energy are closely followed; operations are carried out to include this subject into perspective business plans.
Market	Relevant, always included	There is increasing demand from customers for products that use recycled materials and recycled packaging. Arçelik produces some of the most innovate products in the market which try to find solutions to the plastics pollution,and climate crisis. We have set our 2025 and 2030 targets to increase the recycled and bio-plastic content in products to 20% in 2025 and 40% in 2030.We have also set interim targets to increase the recycled plastic metric tons from 3,000 in 2021 to 15,000 as of the end of 2023. Also, there is a risk of falling behind and not reaping the benefit of new technologies and losing interaction with the customer in terms of circular economy business models. To manage this risk, Arçelik is involved in a EU H2020 project called "CSERVEES",which aims to boost circularity in the electrical and electronic sector. The most reputable international credit agencies are including climate-related risks in their sovereign credit ratings and on a sectoral basis. Arçelik is a publicly traded company, with the majority of the shares held by European investors. We see an increasing trend of investor demand on explanation of our sustainability strategy and solid GHG reduction plans. To manage this risk, Arçelik set its GHG emission reduction road map which includes its 2030 SBT approved by SBTi and 2050 net-zero taregts.
Reputation	Relevant, always included	As Arçelik, we are aware that our environmental-friendly products and production activities turn the reputational risks to the opportunities to increase our brand value. We perform our activities in accordance with these opportunities with a link to contribute to UN 2030 SDGs. Every year, we share our sustainability activities through our sustainability reports with our stakeholders. According to a study conducted by Harvard Business School by reviewing 180 companies, long term market share, and share certificate value of companies having high sustainability performances and reporting them to increase in comparison with those with low sustainability performance and such companies draw the attention of investors. In this scope, all activities concerning the environment including also activities performed in connection with climate change are deemed as an opportunity financially. Environmental production and environment-friendly products are the main elements of Arçelik's sustainability management. E.g. for environmentally friendly products: AquaDrop - Washing Machine with 5.5-Liter Water Consumption; Highly-Efficient 24 " Dryer (Energy Star efficiency); Highly-Efficient Gas Stove Burners (use 17% less gas than standard burners). The other example of the environmentally friendly product is Arçelik Solar Refrigerator developed for rural regions of South Africa. Additionally, as Arçelik, we participate in national and international collaborations to be a part of who combat climate change. As an example, Arçelik's CEO is a commissionaire of the High-Level Commission on Carbon Pricing and Competitiveness and attends meetings. Arçelik is the only Turkish company in this commission. Arçelik follows the decisions about carbon pricing management for both the company itself and Turkey.
Acute physical	Relevant, always included	Important effects of climate change include more arid climate, fall in precipitation quantities, increase in forest fires, decrease in agricultural yield, exhaustion of surface waters, floods, loss of plant species, and dissemination of invasive species. Globally, much more extreme and variable weather conditions are anticipated. It is also anticipated that more floods will occur due to increasing storms and rise at sea levels and this constitutes a risk for our plants in particular which have stream beds nearby. By handling such circumstances as an emergency, emergency drills are conducted; emergency action plans are prepared and implemented. This is a factor that may increase our operational costs too. Another action to manage this risk; since the production of all of the products only in one location is very precarious due to impossibility of continuing to production in case of a natural disaster or any emerging situation, our products are manufactured more than one location; in South Africa, Russia, Romania, China, Thailand, Pakistan, Bangladesh, and India.
Chronic physical	Relevant, always included	Gradual increase of concentration of gases causing greenhouse effect in atmosphere causes the world to warm more than normal and climate changes. Sea levels increase because of melting glaciers due to temperature rise; on the other hand some parts of Antarctica get colder. Important effects of climate change include more arid climate, fall in precipitation quantities, increase in forest fires, decrease in agricultural yield, exhaustion of surface waters, floods, loss of plant species and dissemination of invasive species. It is anticipated that while precipitation quantities will increase in coastal regions, aridity will arise at internal regions because of hot weather, more floods will occur due to increasing storms and rises at sea levels. A 2˚C temperature increase globally will have many significant impacts on Mediterranean Basin which also includes Turkey. If global temperature increase reaches 2˚C, Mediterranean climate will get warmer, aridity will be felt at extensive lands and there will be changes in climate. While general temperature rise in the region reaches to 1-2˚C, this rise may reach to 5˚C at Turkey's internal regions which are away from alleviating impact of sea. Such temperature changes will cause sudden and important changes at costs of energy spent for heating and cooling systems of plants in particular, and affect operational and investment costs. To manage this risk, changes and mean temperature and related risks/emergencies are considered in new investments including facility location choices.

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

Emerging regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased indirect (operating) costs

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

Company-specific description
Currently, we do not have any obligations under any carbon pricing mechanism, as there are no carbon pricing mechanisms in the countries we operate in or we are not a carbon-intensive industry.On the other hand, carbon pricing mechanisms are becoming more common day by day. For example, a market-based carbon pricing mechanism will come into force in the short term in Turkey. In order to be ready for such regulations in the countries that we operate including our sector, there will be a necessity for huge investment to decrease our GHG emissions. This will cause a significant increase in CAPEX. Nonetheless, if the sectors may not reach the given targets, carbon purchase necessity may occur and costs would be affected significantly. Because of the cost increase, there is a risk of affecting product prices.This situation can create a disadvantage in competition. To manage this possible obligation, Arçelik has science-based targets to reduce GHG emissions, energy reduction targets and net zero target in 2050. Arçelik Sustainability Council contributes to these targets every year to increase energy efficiency in production, invest in renewable energy systems and increase the ratio of green electricity to reduce GHG emissions. With energy efficiency projects in Arçelik Global production plants in the last 12 years (2010-21), it has been saved nearly 1.4 Million GJ energy with 2,542 projects. Around 134,000 tCO2e emissions have been prevented since 2010. Arçelik, starting from 2012, has been using green electricity, the supply rate of green electricity in Arçelik Global has reached 69% as of 2021.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
51895113

Explanation of financial impact figure
Financial impacts are calculated according to Emission Trading System (ETS) and Carbon Tax scenarios. If ETS will come into force in near term and if Arçelik ensures the given cap minimum financial impact will be zero. On the other hand, if Carbon Tax will come into force in near term, Arçelik would pay Carbon Tax for its 2021 GHG emissions which is 130,397 tCO2e. Carbon Tax price is calculated according to average prices from the countries which have implemented Carbon Tax already, data is based on World Bank Carbon Pricing Dashboard. The average Carbon Tax price is calculated as 25.06 EUR per ton CO2e (397.98 TRY/tCO2e). Potential financial impact figure – maximum = (130,397 ton CO2e) * (397.98 TRY/tCO2e) =51,895,113 TRY

Cost of response to risk
28167262

Description of response and explanation of cost calculation
To manage the risk, Arçelik has annual energy efficiency targets and has science-based targets which is approved by Science-Based Targets Initiative (SBTi) to reduce its Scope-1 and Scope-2 GHG emissions by 30% as of 2030. Arçelik Sustainability Council contributes these targets every year for increasing energy efficiency in production and using electricity produced by renewable energy sources (RES) to reduce GHG emissions. With energy efficiency projects in Arçelik Global production plants in the last 12 years (2010-21), it has been saved nearly 1.4 Million GJ energy with 2,542 projects. Around 134,000 tCO2e emissions have been prevented since 2010. Arçelik, starting from 2012, has been using green electricity, the supply rate of green electricity in Arçelik Global has reached 69% as of 2021. Only in 2021 we spent approx. 192,420 TRY for energy attribute certificates. Besides, investments and costs of energy efficiency projects in 2021 is realized as 27,974,842 TRY. Totally we spent approx. 28,167,262 TRY for energy efficiency projects & green electricity supply in 2021. (Cost of response to risk : 192,420 TRY + 27,974,842 TRY = 28,167,262 TRY)

Comment
In 2021 we spent approx. 192,420 TRY for energy attribute certificates. Besides, investments and costs of energy efficiency projects in 2021 is realized as 27,974,842 TRY. Totally we spent approx. 28,167,262 TRY for energy efficiency projects & green electricity supply in 2021. (Cost of response to risk : 192,420 TRY + 27,974,842 TRY = 28,167,262 TRY) There are several new machine/equipment investment projects, that is the reason behind the high investment amount.

Identifier
Risk 2

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

Risk type & Primary climate-related risk driver

Current regulation	Enhanced emissions-reporting obligations

Primary potential financial impact
Increased indirect (operating) costs

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

Company-specific description
Approved GHG emission reports to be prepared and sent to the Ministry every year under "The Regulation on Monitoring of GHG Emissions" which was prepared by T.R. Ministry of Environment, Urbanization and Climate Change and entered into force with publication in the Official Journal on 25 April 2012 and with no. 28274, contains calculating and verifying GHG emissions and GHG monitoring plans. Under the regulation, the first reporting obligation period for the industry was started in 2017 for GHG emissions of 2015 and 2016. 2 of Arçelik's production plants (Washing machine and Refrigerator) are in the scope of this regulation. GHG Monitoring Plans of Arçelik production plants have been sent to the Ministry, and these plans have been approved by the Ministry. Likewise, Arçelik's 2021 GHG reports have been audited and verified by the licensed auditor company and submitted to the Ministry. Miscalculations, missing the deadlines for submission, or unapproved GHG reports can cause policy, financial and reputational risk for Arçelik.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
81720

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

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

Explanation of financial impact figure
The financial figure represents the total penalty in case of not updating the emission monitoring plan or not submitting the verified emission report to the TR Ministry of Environment, Urbanization and Climate Change.

Cost of response to risk
81000

Description of response and explanation of cost calculation
To manage the risk, Arçelik has calculated GHG emissions released during its activities since 2006. In 2010, Arçelik established Greenhouse Gas (GHG) Management and Reporting System, before the regulation publishing date. Arçelik calculated the GHG emissions sourced by its facilities by using IPCC Gıidelines and in accordance with ISO 14064-1 GHG Standard. Since 2010, GHG emissions of production plants in Turkey and the Head Quarter have been audited and verified by an independent body in "100% verification" and "reasonable assurance" level. Arçelik shares the GHG emissions with all stakeholders through Sustainability Reports and its website. In addition, Arçelik's related plants (which are within the scope of the Turkish GHG regulation) prepared the monitoring plan for GHG. The monitoring plans have been approved by the T.R. Ministry of Environment, Urbanization and Climate Change (the Ministry). After the approval process, GHG emission reports of Arçelik's related plants were submitted to the Ministry. GHG emission reports should be submitted to the Ministry yearly. The total cost of the verification audits of ISO 14064 and Turkish GHG Regulation for GHG emissions generated in 2021 is approx. 81,000 TL.

Comment
The total cost of the verification audits of ISO 14064 and Turkish GHG Regulation for GHG emissions generated in 2021 is approx. 81,000 TL.

Identifier
Risk 3

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

Risk type & Primary climate-related risk driver

Market	Uncertainty in market signals

Primary potential financial impact
Increased direct costs

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

Company-specific description
Electricity and gas prices for manufacturing businesses have increased sharply in recent years and indications are that prices will continue to increase. The underlying cause of these increases is different for electricity and gas and the contribution of each factor is also different for each country. Increasing energy prices is a crucial risk for our competitiveness in the market.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
92200000

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

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

Explanation of financial impact figure
When we compare the energy costs between 2020-2021, although the production units have increased by 13.1%, our energy cost has increased by 36.3% with the increasing energy unit prices. In this period, our weighted average electricity unit price increased by 47%; weighted average natural gas unit price increased by 37% in our factories within the scope of CDP reporting. If electricity and natural gas unit prices have not increased, we would spent about 206 million TRY for electricity and natural gas consumption. However, due to increase in unit prices our electricity and natural gas costs actualized as 298.2 million TRY. The financial impact of the increasing energy prices is 92.2 million TRY. (298.2 million TRY - 106 million TRY = 92.2 million TRY)

Cost of response to risk
34044842

Description of response and explanation of cost calculation
To manage risk, energy consumption quantity per product is followed in "kWh/product", “m3/product” and reported. In the light of data, obtained projections are made and long term targets are determined. We determine the energy consumption levels at all the stages of our production processes, we query energy efficiency through periodical analyses, we identify areas open to improvement, and we design and realize projects that will increase energy efficiency in production. We applied approximately 228 energy efficiency projects in 2021 and have spent approximately 27.9 million TRY. If we did not apply these energy efficiency and saving projects, we would consume 6.1 million kWh more electricity and 920 k m3 more natural gas. Besides energy efficiency projects, we have invested in solar energy projects in our Eskişehir Refrigerator Factory (1.16 MWp) in Turkey and Defy Jacobs Factory (0.1 MWp) in South Africa 6.07 million TRY during the reporting year. Cost of response: 27.9 millilon TRY + 6.07 million TRY = 34.04 million TRY To mitigate the unit price increasing risk, we change our electricity supply methodology. The electricity generation licenses of the cogeneration facilities established in Arçelik Çayırova and Arçelik Eskişehir campuses make Arçelik an energy market player. By using our existing licenses and being market player in Turkey electricity market, we removed the 3rd party electricity supplier bridge between the energy markets and Arçelik and ensured a cost advantage around 1million TRY. If we have not apply this zero-investment project, we would pay 1 million TRY more for electricity purchases in 2021.

Comment
We invested approximately 27.9 million TRY to energy efficiency projects and 6.07 million TRY for solar energy projects during the reporting year. Besides, if the electricity supply methodology have not been changed, energy cost in terms of electricity consumption, would be around 1 million TRY more.

Identifier
Risk 4

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

Risk type & Primary climate-related risk driver

Technology	Substitution of existing products and services with lower emissions options

Primary potential financial impact
Increased direct costs

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

Company-specific description
New EU energy labeling framework regulation has entered into force and product-specific regulations entered into force for refrigerators, washing machines, TVs, and dishwashers in March 2021. Such an analysis led by the EU Commission showed the current energy label does not fully meet the technological advancement of today. Technological development has exceeded the limits of the current energy label and the top energy-efficient class on the label has already become common in the market. Thus the EU Commission has completed its work on new energy label layouts along with calculation methods of energy efficiency index. Besides, the performance test standard for measuring the energy consumption of refrigerating appliances has been revised. A new measurement methodology has been published for refrigerating appliances and dishwashers in the EU. Performance standards for washing machines and washer dryers have also been revised. R&D test methodologies and product designs were updated accordingly. These regulations are now effective with the introduction of a new energy label. The new label introduced the downgrading of current energy efficiency classes. A+++ of today became C, D, or E based on the energy consumption of products. If Arçelik would not comply with the new EU energy labelling regulation, there was a huge risk for Arçelik that Arçelik's products cannot be put on the both EU and Turkey markets. Also, the new EU energy labelling framework forced Arçelik to design more efficient appliances to meet consumer demands for higher energy-efficient products. There is increasing investment needed to use the Best Available Technology to stay ahead of regulation and put on the market the best energy class products.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
50816591360

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

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

Explanation of financial impact figure
85% of Arçelik's revenue came from Turkey and EU sales in 2021. If Arçelik would not comply with the new EU energy labelling regulation, Arçelik's products could not be put on the both EU and Turkey markets. In this case, this risk would cost Arçelik as its total sales revenue of Turkey and EU markets which is calculated as 50,816,591,360 TL in 2021 (Total of Arçelik's revenue from Turkey and EU market (4.864.000.000 EUR = 50,816,591,360 TL). (1 EUR has been taken as 10.45 TL as the average value in 2021)

Cost of response to risk
1239377599

Description of response and explanation of cost calculation
Arçelik closely follows the new EU energy labelling and eco-design legislation through APPLiA membership and takes necessary internal actions. In strong collaboration with TÜRKBESD, we convey developments about EU eco-design and energy labelling to Turkish Ministry of Industry and Technology and lead the sector. The financial impact of membership to some associations (APPLiA, AMDEA, Digital Europe, WBCSD etc.) is around 4,877,599 TL per year to follow the related regulations closely. To comply with the new labelling regulations Arçelik has environmentally friendly R&D activities. In 2021, the cost of R&D studies for environmentally friendly products is approx. 234,500,000 TL in Arçelik's operations. In addition, Arçelik took out a loan from the European Bank for Reconstruction and Development (EBRD) more than 100 million Euro (approx. 1 billion TL) for the transition to a low-carbon economy. EU energy efficiency target for 2030 is at least 32.5% reduction. In parallel with this target, Arçelik used this loan for the transition of its products into the new EU energy labelling scheme. Products complying with the new EU energy labelling regulations consume less energy and contribute to Arçelik's low-carbon road-map which covers Arçelik's 2030 science-based targets (15% reduction in GHG emissions from use of sold products by 2030 compared to 2018) and 2050 net-zero targets. So, the total cost of the response to this risk is calculated as approx. 940,300,000 TL. (1 EUR has been taken as 10.45 TL as average value in 2021)

Comment
Membership in some associations (APPLiA, AMDEA, Digital Europe, WBCSD etc.) is around 4,877,599 TL in 2021 to follow the related regulations and be updated closely. In 2020, the cost of R&D studies for environmentally friendly products is approx. 234,500,000. Arçelik took out a loan from the European Bank for Reconstruction and Development (EBRD) more than 100 million Euro (1 billion TL) for the transition to a low-carbon economy. So, the total cost of the response to this risk is calculated as 1,239,377,599 TL.

Identifier
Risk 5

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

Risk type & Primary climate-related risk driver

Legal	Exposure to litigation

Primary potential financial impact
Increased indirect (operating) costs

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

Company-specific description
Regulation on the Control of Waste Electrical and Electronic Equipment was published in the Official Gazette No. 28300 of 22.05.2012. Producers are responsible for financing the costs of the collection, treatment, recovery, and environmentally sound disposal of WEEE from private households after collection points and distributors. In the WEEE Regulation, WEEE from private household collection targets: 0.3 kg per inhabitant in 2013, growing to 4 kg/inhabitant in 2018. Collection targets of WEEE from private households are separated according to 6 WEEE collection categories. As white good producer, Arçelik should meet collection, recycling and recovery targets. One of the important climate change issues in WEEE management for Arçelik is the emitting risk of high GWP refrigerants in old refrigerators during recycling process. Due to the collection and destruction of the refrigerants originating from old refrigerators, costs will be incurred under Regulation on Waste Electric and Electronic Equipment (WEEE).

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
20000

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

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

Explanation of financial impact figure
During the lifetime of the refrigerators and coolers, there are annual losses of blowing agents. The losses change according to the age of the equipment. The quantity of collected blowing agents in the WEEE treatment plant has been estimated. For the last 5 years, the cost of disposal of the gases to prevent fugitive emissions is approx. 20,000 TL.

Cost of response to risk
9000000

Description of response and explanation of cost calculation
To manage this risk, Arçelik established 2 treatment plants to recycle WEEEs. Refrigerators and other cooling appliances contain Chlorofluorocarbons (CFCs) are

environmentally recycled. Take-back campaigns are organized to collect old home appliances. The goal of the take-campaigns is transforming the old refrigerators and other old cooling appliances with new and environmentally friendly ones that have refrigerants with low GWP gas and are more energy-efficiently. The investment cost of Arçelik's WEEE recycling plants is approximately 9 million TL.

Comment
The investment cost of the WEEE recycling plants is approximately 9 Million TL.

Identifier
Risk 6

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

Risk type & Primary climate-related risk driver

Acute physical	Cyclone, hurricane, typhoon

Primary potential financial impact
Decreased revenues due to reduced production capacity

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

Company-specific description
Gradual increase of concentration of gases causing the greenhouse effect in atmosphere causes the world to warm more than normal and climate changes. Sea levels increase because of melting glaciers due to temperature rise; on the other hand some parts of Antarctica get colder. Important effects of climate change include more arid climate, fall in precipitation quantities, increase in forest fires, decrease in agricultural yield, exhaustion of surface waters, floods, loss of plant species and dissemination of invasive species. Globally, much more extreme and variable weather conditions are anticipated in the future, it is anticipated that while precipitation quantities will increase in coastal regions, aridity will arise at internal regions because of hot weather, more floods will occur due to increasing storms and rises at sea levels. A 2˚C temperature increase globally will have many significant impacts on Mediterranean Basin which also includes Turkey. If global temperature increase reaches 2˚C, the Mediterranean climate will get warmer, aridity will be felt at extensive lands and there will be changes in climate. While general temperature rise in the region reaches to 1-2˚C, this rise may reach to 5˚C at Turkey's internal regions which are away from alleviating the impact of sea. In this case, Arçelik will face important changes at costs of energy spent for heating and cooling systems of plants in particular, and affect operational and investment costs. Floods that may happen due to sudden temperature rises and decreases constitute risk for Arçelik's production plants in particular which have stream beds nearby. By handling such circumstances as emergencies, emergency drills are conducted; emergency action plans are prepared and implemented. This is a factor that may increase our operational costs too.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
1560000000

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

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

Explanation of financial impact figure
We have a new production plant in Romania. The investment cost for the new production plant in Romania project is approx. 150 million Eur (approx 1.56 billion TL).

Cost of response to risk
1560000000

Description of response and explanation of cost calculation
Changes and mean temperature and related risks/emergencies are considered in new investments including facility location choices. Since the production of all of the products only in one location is very precarious due to the impossibility of continuing to production in case of a natural disaster or any emerging situation, our products are manufactured more than one location; in South Africa, Russia, Romania, China, Thailand, Pakistan, Bangladesh, and India. The investment cost for the Romania project is approx. 150 million Eur (approx 1.56 billion TL).

Comment
We have a new production plant in Romania. The investment cost for the new production plant in Romania project is approx. 150 million Eur (approx 1.56 billion TL)

Identifier
Risk 7

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

Risk type & Primary climate-related risk driver

Reputation	Increased stakeholder concern or negative stakeholder feedback

Primary potential financial impact
Decreased access to capital

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

Company-specific description
According to a Harvard Business School study, long-term market share and share certificate value of companies having high sustainability performances and reporting them to increase in comparison with those with low sustainability performance and such companies draw the attention of investors. In line with this approach, all stakeholders including investors care about companies' green energy investment, usage and energy efficiency progress. It is possible to reduce carbon emissions by using renewable energy in two ways; it can be produced or it can be supplied from a renewable energy supplier. In Turkey, there are some energy companies that are producing electricity from renewable sources like hydropower, solar, and wind. Starting from 2012 June, we have been using electricity generated from renewable energy sources by increasing the renewable electricity ratio every year. In 2021, we have continued our practice of supplying energy generated from renewable energy resources to our HQ and production plants in Turkey, Romania and Russia. With the increasing expectations of the stakeholders, the demand for energy attribute certificates (EAC) is increasing each year. This situation causes to increase in the price of these certificates.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
3489926

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

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

Explanation of financial impact figure
If we take the average cost of energy attribute certificates as 1 EUR/MWh (10.43 TRY/kWh), around 3,489,926 TRY extra cost for each year. Arçelik's electricity consumption in 2021 for the factories within the scope of CDP reporting was 334,604 MWh. Potential financial impact figure (currency) : (334,604 MWh) * (10.43 TRY/MWh) = 3,489,926 TRY (approx.)

Cost of response to risk
41200000

Description of response and explanation of cost calculation
We aim to decrease our energy consumption and increase our installed renewable energy capacity to 50 MW in our operations by 2030. As of 2021, we have 3.26 MW installed capacity. To achieve these goals, we will invest a total of 31.1 million Euro (495 million TRY) to establish renewable energy systems and 11.3 million Euro for energy efficiency projects (316 million TL) globally (Total 371 million TL, annually 41.2 million TL).

Comment
We aim to decrease our energy consumption and increase our installed renewable energy capacity to 50 MW in our operations by 2030. As of 2021, we have 3.26 MW installed capacity. To achieve these goals, we will invest a total of 31.1 million Euro (495 million TRY) to establish renewable energy systems and 11.3 million Euro for energy efficiency projects (316 million TL) globally (Total 371 million TL, annually 41.2 million TL). Please see our strategy to combat climate change: https://www.arcelikglobal.com/media/6503/climate_change_strategy.pdf In the scope of our 2050 net-zero target, we aim to implement new energy efficiency projects (emission reduction projects), purchase electricity generated from renewable energy sources, invest in renewable energy plants, and establish our own carbon offset projects.

Identifier
Risk 8

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

Risk type & Primary climate-related risk driver

Technology	Transitioning to lower emissions technology

Primary potential financial impact
Increased capital expenditures

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

Company-specific description
For the post-2012 period, Turkey has signed the Paris Agreement in COP21 and submitted its INDC plan which includes the reduction target to the UN Secretariat. On 7th of October 2021, the Turkish Parliament ratified the Paris agreement. However, it is still not clarified that how this target is distributed to sectors. In case of designation of a reduction target, companies would be required to adapt in a short period of time and fully comply with targets. In addition, when Turkey's new Integrated Environmental Directive draft (for EU IPPC implementation) comes into force, there will be investment costs for GHG mitigation emitted from industries operations. In this case, Arçelik may face very high financial risk due to operational and investment costs for the implementation of additional operational activities and/or BAT (Best Available Technologies) to reduce GHG emissions from its Scope 1-2-3 emissions. Secondly, there might be a carbon purchasing cost in case Arçelik does not achieve its carbon reduction targets.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
300100000000

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

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

Explanation of financial impact figure
Turkish Ministry of Environment, Urbanization and Climate Chanege - EU Integrated Environmental Compliance Strategy Report 2016-2023 declares if Turkey starts to implement IPPC Directive requirements as in the EU, the investment financial resource for Turkish industries will be approx. 28.8 billion EUR (300.1 billion TL).

Cost of response to risk
61784457

Description of response and explanation of cost calculation
Most of the production processes of Arçelik production plants comply with IPPC and BAT documents. Nanotechnology applications are implemented in production. The integration process for introducing “Environmentally Friendly Nanotechnology Product” has been using for the entire plants to reduce the use of pre-treatment chemicals and energy during the surface finishing before the implementation of sheet piece powder coating. Thanks to this product, the related process is completed at 25 oC instead of 50-55 oC. Therefore, a significant level of energy is saved due to heat reduction, while also the process also no longer produces any phosphate sludge. As one of the best practices for example; in our dishwasher plant, the nanotechnology surface treatment process is being used in the production process since 2012. This technology provides less natural gas consumption (35053 m3/year reductions) and less GHG emission emitting (70 tCO2e/year reduction). Thanks to this transition, our dishwasher plant has been selected as “Best Available Technology (BAT) using plant” by T.R. Ministry of Environment and Urbanization. In addition, the powder dye coating transition has been implemented in Arçelik plants. And this transition reduced VOC (volatile organic compound). In 2021, we allocated approx. 61.8 million TL in all our production plants in Turkey for environmental expenditure and investments (capex and opex).

Comment
Most of the production processes of Arçelik production plants comply with IPPC and BAT documents. Nanotechnology applications are implemented in production. The integration process for introducing “Environmentally Friendly Nanotechnology Product” has been using for the entire plants to reduce the use of pre-treatment chemicals and energy during the surface finishing before the implementation of sheet piece powder coating. Thanks to this product, the related process is completed at 25 oC instead of 50-55 oC. Therefore, a significant level of energy is saved due to heat reduction, while also the process also no longer produces any phosphate sludge. As one of the best practices for example; in our dishwasher plant, the nanotechnology surface treatment process is being used in the production process since 2012. This technology provides less natural gas consumption (35053 m3/year reductions) and less GHG emission emitting (70 tCO2e/year reduction). Thanks to this transition, our dishwasher plant has been selected as “Best Available Technology (BAT) using plant” by T.R. Ministry of Environment and Urbanization. In addition, the powder dye coating transition has been implemented in Arçelik plants. And this transition reduced VOC (volatile organic compound). In 2021, we allocated approx. 61.8 million TL in all our production plants in Turkey for environmental expenditure and investments (capex and opex).

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
Markets

Primary climate-related opportunity driver
Access to new markets

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

Company-specific description
Arçelik has started operations for voluntary carbon trade to quickly adapt to the system the moment obligatory trade commences and to turn it into an opportunity after the post-2012 period. Since the Green Climate Fund steps, we constantly compile information about future carbon markets. We plan advanced level operations so that our Company will benefit to a maximum level from carbon trade both domestic and abroad. As a start, we have developed a voluntary Carbon Financing Project, “Arçelik Carbon Financing Project for Energy Efficient Refrigerators" we implemented in Turkey. The aim of the project is to manufacture of energy-efficient refrigerators by applying advanced technologies and to sell them to Turkish customers. The Project crediting period is 10 years (2013-2023) and the estimated total emission reduction resulting from this project is around 1.8 million tCO2e.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
3700000

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

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

Explanation of financial impact figure
Involuntary carbon market, the unit price of carbon is assumed as approx. 0.20 – 0.40 EUR for VCS. The estimated average emission reductions resulting from this project are estimated at around 1.8 million tCO2e, approx. 360 K – 720 K EUR (approx. 3.7 million – 7.5 million TL)

Cost to realize opportunity
200000

Strategy to realize opportunity and explanation of cost calculation
To realize this opportunity we have developed a carbon trade project called “Arçelik Carbon Financing Project for Energy Efficient Refrigerators” as a voluntary carbon trade project. The total management cost of realizing this project is around 200,000 TL.

Comment
To realize this opportunity we have developed a carbon trade project called “Arçelik Carbon Financing Project for Energy Efficient Refrigerators” as a voluntary carbon trade project. The total management cost of realizing this project is around 200,000 TL.

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 resulting from increased demand for products and services

Company-specific description
The EU regulation for ecodesign requirements for refrigerating appliances were published in 2009. It introduces a gradual ban of less efficient products in the market. Placing refrigerators of energy class B and lower on the market are banned as of 1 July 2010. It is ruled that energy class of A cannot be put on the market from July 2012 on. In July 2014, the minimum allowable energy efficiency index set to 42 which is 44 before. In Turkey, the same regulations are transposed into national law in order to be harmonized with the EU laws. As a result, “A” energy class products cannot be put on the market as of today both in Turkey and EU. EU Commission has completed first analysis of current situation and comparison with the technological development of the industry. Preparatory studies for ecodesign & energy labelling revisions have been completed for refrigerators, washing machines, dishwashers, and washer-dryers. Draft regulations have been sent to EU Parliament and Council for scrutiny. A common goal in all these regulations is to revise the label scale into A(most efficient) to G(least efficient).

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
21500000000

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

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

Explanation of financial impact figure
In 2005, the Company’s consolidated sales revenue was 3.1 billion EUR (approx 4.96 billion TL), while the international sales share was 40%of total sales revenue (1.2 billion EUR ~ 1.92 billion TL). In 2021, the consolidated net sales turnover reached 68.18 billion TL, and international sales comprised 69.5% of consolidated sales (Approx. 47.4 billion TL). One of the main reasons for the increase in international sales share is our investment in environmentally friendly R&D activities and producing competitive energy-efficient products.

Cost to realize opportunity
234500000

Strategy to realize opportunity and explanation of cost calculation
The overall energy efficiency of Arçelik refrigerators sold in Turkey and the EU were classified as “A+” by the end of 2012. It reached to "A++" in Turkey by 2020. Investment in the improvement of high-efficiency components is a key element to maintain sustainable energy efficiency increase. A compressor is one of the key components of the refrigerator. R&D activities on variable speed compressors have reached an advanced level. Variable speed compressors enable the refrigerator to consume less energy. In addition, continuous R&D activities have yielded efficient fan blade designs that are being used in today’s products. Another tool to reach high-

energy-efficient refrigerating appliances is considered insulation. The better the insulation, the higher the energy efficiency. Vacuum insulation panels(VIP) provides excellent insulation compared to PU insulation. Besides Arçelik endeavors to create a new level of VIPs with a very low thermal conductivity that leads to design high energy efficiency. Strong background in cooling design is a powerful tool in the hands of Arçelik to reach the energy efficiency targets of 2018. Arçelik's long-term plan and product roadmap systematic constitutes our main method. At least once a year, energy & environmental-friendly product range and portfolio definition is made with top management, through this strong method we have towards domestic target markets environmental-friendly products. Spent approximately 234.5 million TL in total R&D studies for environmentally friendly products in 2021. (Assumption for 2021, 1 Euro = 10.44749 TL).

Comment
The cost of R&D studies for environmentally friendly products in total is approx. 234.5 million TL in 2021.

Identifier
Opp3

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 resulting from increased demand for products and services

Company-specific description
Within the scope of its Extended Product Responsibility, Arçelik made investments for encouraging the recovery of the old products (WEEE) and established its own WEEE recycling plants in Bolu and Eskişehir to provide the usage of WEEEs as resources. Large white goods and small household appliances are recycled in Arçelik's WEEE Recycling Plants. Therefore, the reduction of GHG emissions is ensured, especially through the recycling of old and high electricity consuming products at the WEEE recycling plants, thereby also contributing to our country's combat climate change. To increase the tendency of consumers' buying behavior towards energy-efficient products, "The Greatest Renewal Movement of Turkey Campaign" has been started across Turkey for the purpose of collecting WEEEs and gain them to nature and national economy, with the slogan "Let the Return to Nature Begin". Recycling is also encouraged through our sales campaigns. The campaign contributed to shape and develop our sustainable business model. Accordingly, it is seen that there is a gradual tendency in consumers' changing their old and low efficient products with new energy-efficient products. This is an opportunity for Arçelik.

Time horizon
Short-term

Likelihood
Very unlikely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
42500000

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

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

Explanation of financial impact figure
A significant contribution to energy efficiency in our country is ensured through the recycling of high energy-consuming old products. Arçelik, the first and only company to establish its own recycling plant, also initiated the Great Renewal Movement and took used white goods regardless of their brand from end-users and replaced them with new environmentally friendly products. Between the years of 2014-2021, since 2014, we have recycled 1.6 million WEEE units in our WEEE recycling plants. The energy-saving as a result of the recycling processes within the two plants is 397 GWh. This is equivalent to the daily electricity consumption of about 50 million Turkish households. This amount is equivalent to the annual energy production of 64 wind turbines with a capacity of 2.5 MW. In addition by recycling waste products, we have prevented about 195,000 tons of CO2 emissions. Thanks to our WEEE recycling plants in Turkey, we gained approx. 42,500,000 TL in 2021 by selling scraps (metals, plastics, glasses, etc.) which were obtained by recycling of collected WEEE's from customers

Cost to realize opportunity
9000000

Strategy to realize opportunity and explanation of cost calculation
Within the scope of its Extended Product Responsibility, Arçelik made investments for encouraging the recovery of the old products (WEEE) and established its own WEEE recycling plants in Bolu and Eskişehir to provide the usage of WEEEs as resources. Large white goods and small household appliances are recycled in Arçelik's WEEE Recycling Plants. The investment cost of the WEEE recycling plants is approximately 9 Million TL. To increase the demand for consumers' changing buying behavior towards energy-efficient products. "The Greatest Renewal Movement of Turkey Campaign" has been started across Turkey for the purpose of collecting WEEEs and reintroducing them to nature and national economy, with the slogan "Let the Return to Nature Begin". As part of the market transformation campaign, WEEEs collected from customers by Arçelik and Beko dealers and authorized services were sent to Arçelik's own licensed recycling plants. Materials obtained from WEEEs recycled at plants are regained to the economy in accordance with the concept of "Circular Economy".

Comment
The investment cost of the WEEE recycling plants is approximately 9 Million TL.

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 resulting from increased demand for products and services

Company-specific description
According to a study conducted by Harvard Business School by reviewing 180 companies, long term market share, and share certificate value of companies having high sustainability performances and reporting them to increase in comparison with those with low sustainability performance and such companies draw the attention of investors. In this scope, all activities concerning the environment including also activities performed in connection with climate change are deemed as an opportunity financially. As Arçelik, we are aware that our environmentally-friendly products and production activities are opportunities to increase our brand value. We perform our activities and set our sustainability targets including climate-related targets in line with UN 2030 SDGs. We share our sustainability management, approaches, activities, and results through our sustainability reports with our stakeholders yearly.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
21500000000

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

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

Explanation of financial impact figure
In 2005, the Company's consolidated sales revenue was 3.1 billion EUR (approx 4.96 billion TL), while the international sales share was 40%of total sales revenue (1.2 billion EUR ~ 1.92 billion TL). In 2021, the consolidated net sales turnover reached 68.18 billion TL, and international sales comprised 69.5% of consolidated sales (Approx. 47.4 billion TL). One of the main reasons for the increase in international sales share is our investment in environmentally friendly R&D activities and producing competitive energy-efficient products.

Cost to realize opportunity
234000000

Strategy to realize opportunity and explanation of cost calculation
Environmentalist approaches in production and environmentally-friendly products are the main elements of Arçelik's sustainability management. Arçelik manages sustainability within its activities via Sustainability Council. The cost of R&D studies for environmentally friendly products in Turkey is approx. 234 million TL in 2021. (Assumption for 2021, 1 Euro = 10.44749 TL).

Comment
The cost of R&D studies for environmentally friendly products in Turkey is approx. 234 million TL in 2021.

Identifier
Opp5

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 resulting from increased demand for products and services

Company-specific description
We adopted to go beyond the legislations&standards regarding efficiency in all countries that we have production plants to lead our sector. In this context, we produce our products with standard production rules that indicate environmental protection and energy efficiency are the priority in all areas. In new investments, we take our product&production technologies to that country and ensure that country also become aware of energy-efficient products, therefore we seize the opportunity to contribute to the reduction of the country's GHG emissions. E.g. in 2014, Arçelik became a partner of the project called United for Efficiency which was organized by UNEP and GEF to widen energy-efficient products in houses contributing GHG emission reduction. In this project, Arçelik gave technical support to developing countries particularly Thailand and South Africa to increase energy efficiency in refrigerators.In SA our employees climbed to Kilimanjaro mountain to attract attention to global warming. We contribute to the development of countries where we invest. Following our acquisition of Defy in S. Africa in 2011, we have made enormous investments in innovation and product energy efficiency. As a results, the average energy efficiency class of our refrigerator sales in South Africa increased from "E" to "A" in 5 years. That equates to a more than 50% decrease in energy consumption.Now, we have upgraded our refrigerator product range to A+. The minimum energy efficiency standard in South Africa is B (and C for freezers). The gap between what we offer at a minimum and the legal limit is more than 40% energy saving. In addition, in our SA plant,we plan to transition to environmentally friendly refrigerants used in refrigerators. We focus on decreasing the overall energy of our products, helping our customers ensure financial savings while reducing energy, GHG emissions. We engage with our customers ,raise their awareness through advertisements, documentaries, and publications related to energy efficiency. In this way, we support customers in making more sustainable choices. In 2021, 51.6% of our turnover was from our energy-efficient products. While increasing our revenue from eco-friendly products, we also aim to improve product performance on a yearly basis. In 2021, we improved the average energy consumption of washing machine products in Turkey by 20%, and tumble dryer, refrigerators, and dishwashers by 4%, 3.5%, 1%, respectively, compared to 2020

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
35000000000

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

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

Explanation of financial impact figure
In line with Arçelik's already approved SBTs (decreasing Scope 3 use of sold products by 15%) and under approval new SBTs in line with 1.5 degree Celsius (decreasing Scope 3 use of sold products by 50.4%) Arçelik needs to make energy-efficient and ecofriendly products more available in each country the company operates including also developing nations. In line with this target, Arçelik aims to make increased R&D for efficient and affordable products such as refrigerators comprising low thermal conductivity insulators, using nonflourinated refrigerant heatpump systems in all washing machines and dishwashers, new and novel heatpump technologies etc. The company also aims to increase the rate of recycled materials in the products. Until 2030, Arçelik aims to increase recycled plastic content to 40% (interim 2025: 20%) and bio-based material content to 5% (interim 2025: 2.5%).. In 2021, 51.6% of our turnover was from our energy-efficient products. While increasing our revenue from eco-friendly products, we also aim to improve product performance on a yearly basis. The potential financial impact figure has been calculated as approx. 35 billion TL (68 .18 billion * 51.6%).. Arçelik reached 6.5 billion Euros (68.18 billion TL) in consolidated revenues in 2021.(Assumption for 2021, 1 Euro = 10.44749 TL)

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
Cost of Defy acquisition realized as 324 million USD. (3,384,986,760 TL)revenues in 2021.(Assumption for 2021, 1 Euro = 10.44749 TL)

Comment
Cost of Defy acquisition realized as 324 million USD. (3,384,986,760 TL)revenues in 2021.(Assumption for 2021, 1 Euro = 10.44749 TL)

Identifier
Opp6

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

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of climate adaptation, resilience and insurance risk solutions

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Arçelik's CEO is a commissionaire of the High Level Commission on Carbon Pricing and Competitiveness and attends to meetings. Arçelik is the only Turkish company in this commission. Arçelik follows the decisions about carbon pricing management for both the company itself and Turkey.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
0

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

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

Explanation of financial impact figure
There is no financial impact of being a commissionaire of the High-Level Commission on Carbon Pricing and Competitiveness.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
Arçelik's CEO became a commissionaire of the High-Level Commission on Carbon Pricing and Competitiveness and attends meetings. Arçelik is the only Turkish company in this commission. Arçelik follows the decisions about carbon pricing management for both the company itself and Turkey. Arçelik sets carbon management strategies and targets including internal carbon pricing for its all production plants. There is no cost for being a commissionaire of the High-Level Commission on Carbon Pricing and Competitiveness.

Comment
Arçelik's CEO became a commissionaire of the High-Level Commission on the World Bank's Carbon Pricing Leadership Coalition and attends meetings. Arçelik is the only

Turkish company in this commission. Arçelik follows the decisions about carbon pricing management for both the company itself and Turkey. Arçelik sets carbon management strategies and targets including internal carbon pricing for its all production plants. There is no cost for being a commissionaire of the High-Level Commission on Carbon Pricing and Competitiveness.

Identifier
Opp7

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
Reduced indirect (operating) costs

Company-specific description
In 2021, we issued Turkey's first-ever corporate green bond in international markets, with a €350 million (3,657 billion TL)nominal value with a five-year maturity. The bond attracted a high level of demand from investors - being almost five times oversubscribed. In 2021, we signed a loan agreement with the European Bank of Reconstruction and Development for EUR 150 million (1,567 billion TL) and a maturity of eight years. Arçelik aims to use the bond to finance its Eligible Green Projects, including its energy-efficient, eco-efficient, and circular economy-adapted products and the promotion of energy efficiency in production. In addition, the proceeds will fund the company's sustainable water and wastewater management, pollution prevention control, renewable energy, and green building initiatives. EBRD loan is the first externally verified green loan to Turkish manufacturing. Arçelik plans to implement important projects to achieve net-zero emissions in the value chain by 2050 by financing environmental sustainability and R&D projects in its manufacturers within the framework of the provided green credit. These help us for transition to a low-carbon economy. EU energy efficiency target for 2030 is at least a 32.5% reduction. In parallel with this target, Arçelik aims to use this loan &this bond for energy efficient products, energy efficiency in production, and increasing circularity, and contribute to Arçelik's low-carbon road map. (Assumption for 2021, 1 Euro = 10.44749 TL).

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
50917782000

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

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

Explanation of financial impact figure
75% of Arçelik's revenue came from Turkey and EU sales in 2021. Since Arçelik complies with the new EU energy labelling regulation, Arçelik's products are located in the both EU and Turkey markets. So, according to calculations based on Arçelik's 2021 revenue, this compliance provides to Arçelik its total sales revenue of Turkey and EU markets which is calculated as 50,917,782,000 TL in 2021.

Cost to realize opportunity
5224000000

Strategy to realize opportunity and explanation of cost calculation
In 2021, we issued Turkey's first-ever corporate green bond in international markets, with a €350 million (3,657 billion TL) nominal value with a five-year maturity. The bond attracted a high level of demand from investors - being almost five times oversubscribed. In 2021, we signed a loan agreement with the European Bank of Reconstruction and Development for EUR 150 million (1,567 billion TL) and a maturity of eight years. Arçelik aims to use the bond to finance its Eligible Green Projects, including its energy-efficient, eco-efficient, and circular economy-adapted products and the promotion of energy efficiency in production. In addition, the proceeds will fund the company's sustainable water and wastewater management, pollution prevention control, renewable energy, and green building initiatives. EBRD loan is the first externally verified green loan to Turkish manufacturing. Arçelik plans to implement important projects to achieve net-zero emissions in the value chain by 2050 by financing environmental sustainability and R&D projects in its manufacturers within the framework of the provided green credit. These help us for transition to a low-carbon economy. EU energy efficiency target for 2030 is at least 32.5% reduction. In parallel with this target, Arçelik aims to use this loan for transition of its products into new EU energy labelling scheme. Products complying with the new EU energy labelling regulations will consume less energy and contribute to Arçelik's low-carbon road-map. (Assumption for 2021, 1 Euro = 10.44749 TL).

Comment
Arçelik issued Turkey's first-ever corporate green bond in international markets, with a €350 million (3,657 billion TL) nominal value, and took out a loan from European Bank for Reconstruction and Development (EBRD) for EUR 150 million (1,567 billion TL) for transition to a low-carbon economy.

Identifier
Opp8

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

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of new technologies

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description
Energy-efficient electric motor transformation in our production plants

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
650000

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

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

Explanation of financial impact figure
Arçelik has started its electric motor transformation movement in 2014. The target was set as to change all inefficient electric motors (IE0, IE1, IE2) with the capacity of 5.5 kW and above. From 2014 until today, we changed hundreds of inefficint motors with efficient ones (IE3 and IE4). By transforming remaining inefficient motors, it is estimated to save 650,000 TRY yearly. We have become a member of EP100, led by Climate Group. EP100 brings together more than 120 energy-smart companies committed to using energy more productively. Through this membership, we are committed to doubling our economic output for every unit of energy we consume globally by 2030, compared to 2010, by increasing energy efficiency. At COP26, Arçelik attended the EP100 panel focusing on product efficiency, discussed how to double the efficiency of four key appliances (Air Conditioners, electric motors, refrigerators, and lighting) globally by 2030, and supported the op-ed of the Climate Group including a Call to Action for product efficiency to save electricity and mitigate CO2 emissions. We continue our work on energy-efficient motor transition.

Cost to realize opportunity
1690000

Strategy to realize opportunity and explanation of cost calculation
First of all, we prepared our electric motor inventory including all motors with a capacity of 5.5 kW and above. We made a feasibility analysis by using data of motors capacity, load factor, efficiency class, working hours, etc. Then, we started to change inefficient motors started with the ones which have the lowest payback time. With this transformation, our energy consumption in our production plants is being reduced. So that our GHG emissions are being decreased dependently. One of the main reasons for the rapid realization of this project is purchasing these energy-efficient motors from WAT Motor A.Ş. which is an association of Arçelik A.Ş. The investment cost of the energy-efficient motor transformation project has been calculated as 1,690,000 TL.

Comment
The investment cost of the energy-efficient motor transformation project is 1,690,000 TL.

Identifier
Opp9

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 access to capital

Company-specific description
Arçelik completed the issuance of its Green Bond, the first of its kind in the international markets from a Turkish industrial Company, has a nominal value of 350 million Euros (3,657 billion TL) , with a five-year maturity and a redemption date of 27 May 2026. Arçelik aims to use the bond to finance its Eligible Green Projects, including its energy-efficient, eco-efficient and circular economy adapted products and the promotion of energy efficiency in production. In addition, the proceeds will fund the company's sustainable water and wastewater management, pollution prevention control, renewable energy, and green buildings initiatives. You can view all the documents related to Arçelik's Green Bond 2021: https://www.arcelikglobal.com/en/company/investor-relations/debt-securities/greenbond-2021/ (Assumption for 2021, 1 Euro = 10.44749 TL).

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
3657000000

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

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

Explanation of financial impact figure
Arçelik completed the issuance of its Green Bond, the first of its kind in the international markets from a Turkish industrial Company, has a nominal value of 350 million Euros (3,657 billion TL)) , with a five-year maturity and a redemption date of 27 May 2026. Arçelik aims to use the bond to finance its Eligible Green Projects, including its energy-efficient, eco-efficient and circular economy adapted products and the promotion of energy efficiency in production. In addition, the proceeds will fund the company's sustainable water and wastewater management, pollution prevention control, renewable energy, and green buildings initiatives. You can view all the documents related to Arçelik's Green Bond 2021: https://www.arcelikglobal.com/en/company/investor-relations/debt-securities/greenbond-2021/ (Assumption for 2021, 1 Euro = 10.44749 TL).

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
During the Green Bond application process, Arçelik faced some costs related to third-party services. Since it is confidential, the cost to realize this opportunity has not been shared.

Comment
Arçelik completed the issuance of its Green Bond, the first of its kind in the international markets from a Turkish industrial Company, has a nominal value of 350 million Euros (3,657 billion TL) , with a five-year maturity and a redemption date of 27 May 2026. Arçelik aims to use the bond to finance its Eligible Green Projects, including its energy-efficient, eco-efficient and circular economy adapted products and the promotion of energy efficiency in production. In addition, the proceeds will fund the company's sustainable water and wastewater management, pollution prevention control, renewable energy, and green buildings initiatives. You can view all the documents related to Arçelik's Green Bond 2021: https://www.arcelikglobal.com/en/company/investor-relations/debt-securities/greenbond-2021/ (Assumption for 2021, 1 Euro = 10.44749 TL).

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan
Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan
Yes

Mechanism by which feedback is collected from shareholders on your transition plan
Our transition plan is voted on at AGMs and we also have an additional feedback mechanism in place

Description of feedback mechanism
In addition to sharing/voting our 1.5°C aligned transition plan at AGMs, we receive questions/opinions from our shareholders or investors and arrange meetings for their feedback about our climate-related transition plans and reports.

Frequency of feedback collection
More frequently than annually

Attach any relevant documents which detail your transition plan (optional)
Arcelik_Transition Plan that aligns with a 1.5°C World.pdf

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future
<Not Applicable>

Explain why climate-related risks and opportunities have not influenced your strategy
<Not Applicable>

C3.2

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

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios: RCP 4.5	Company-wide	<Not Applicable>	Based on S&P Trucost Physical Risk Analysis outcome, water stress was the main risk for Arçelik and its suppliers in terms of global warming-related physical disruption risks. To deep dive into this issue, Arçelik has applied extensive water stress risk testing using its own assumptions as well as WRI Aqueduct Water Risk Atlas and World Wildlife Fund Water Risk Filter to determine the level of risk under different scenarios. The scope covers global operations and suppliers sending painted components to Arçelik. RCP 4.5 has been used with three time periods (reporting year, 2030, 2050). RCP 4.5 indicates a scenario where strong mitigation actions would more likely than not limit global warming to 2°C until 2100. Changes in production country-specific river basin based water stress and quality have been taken as major assumptions. Up to 25% lack of water availability has been put into the calculation with different production quantities. The revenue and production growth assumptions have been based on a scenario where major global warming issues would have a limited impact on GDP and thus the demand has been kept at an increasing pace. The probability of Arçelik keeping up with its global water withdrawal and water recycling targets has been analyzed in scenarios where targets would be met, would be exceeded, or would not be met. It has been observed that if the publicly available water withdrawal and water recycling targets of Arçelik are met and water withdrawal is stabilized despite increasing production rates, Arçelik will not incur financial losses until production facilities face 25% of the current water disruption. However, in case the ability to meet the publicly available water targets fails, Arçelik will face potential water disruption issues, which would have considerable financial implications. Arçelik has invested and will continue to invest in water efficiency and water recycling projects within the scope of its Green Bond issued in 2021 and its green loan borrowed from the European Development Bank. Arçelik has received commitment letters from more than 180 of its high-volume selected suppliers that these suppliers would set their own publicly available water reduction and recycling targets as of the end of 2023.
Physical climate scenarios: Customized publicly available physical scenario	Company-wide	1.5ºC	Arçelik has outsourced S&P to conduct a physical risk analysis for its own operations as well as of its selected suppliers to understand the damage to assets, interruption of operations and disruption to supply chains based on different climate warming scenarios and timelines. S&P Trucost Climate Change Physical Risk Analytics has been applied to measure Arçelik's physical risks in terms of adaptation scenarios. An asset level approach has been adopted at the company and portfolio level based on three time periods (2020 baseline, 2030 and 2050) and three climate scenarios (RCP 2.6, 4.5 and 8.5 to model the magnitude and the potential impact of both acute and chronic physical risks on company financials and operations. Private Trucost owned datasets as well as other datasets including but not limited to WRI Aqueduct, CMIP5 multimodel-average, NOAA and Climate Central have been used. Seven key climate change physical hazards have been considered: flood, water stress, heatwave, coldwave, hurricanes, sea level rise and wildfires. The below-mentioned factors have been considered to calculate the risks related to Arçelik and its value chain: Excess Heat Factor (EHF) and Excess Cold Factor (ECF) Index to measure heatwave occurrence and intensity, Baseline Water Stress Index to measure total water withdrawals to the available water sources, Burnt Area in terms of wildfires, Riverine Flood Risk in terms of floods, Coastal Inundation in terms of sea level rise, Hurrican Index to measure the frequency and intensity of hurricanes. 5 analytical approaches have been considered: Climate Hazard Mapping, Physical Asset Geolocation and Corporate Ownership Mapping, Asset and Company Level Physical Risk Scoring, Revenue Exposure Based on Physical Risk Estimation and Composite Score Calculation. Based on the outcomes of the S&P Trucost Climate Change Physical Risk Analysis, Arçelik and its suppliers are exposed to a moderate level of physical risk with greatest exposure to water stress, heat wave and coldwave. As water stress is the biggest risk factor, Arçelik has a target to increase water recycling ratio to 70% in global operations as of 2030. At the supplier level, Arçelik has collected a signed commitment letter from more than 180 of its core 400 suppliers making up more than 90% of purchasing volume to have set publicly available water reduction/recycling targets no later than the end of 2023 in their sustainability reports/websites.
Transition scenarios: IEA STEPS (previously IEA NPS)	Company-wide	<Not Applicable>	A qualitative and quantitative approach considering reporting year,2030&2050 years. A combination of IPCC's RCP 8.5,4.5 and SSP potential pathways are analyzed in line with IEA STEPS Scenario.This is a mid scenario between business as usual with no or minimal change in emissions reductions,delayed regulations would not meet Paris Agreement promises to limit global warming in line with a 1.5°C. Temperatures would rise somewhere between 1.6°C-3.°C-5.4°C, increasing physical risks faced by Arçelik, thus the business disruption adaptation costs. Facts: We have global 2030 Science Based Targets and are committed to setting a Net Zero 2050 SBT.More than 80% of the GHG emissions of Arçelik come from the use phase of sold products.Production and sales of energy efficient yet affordable appliances is the key to drive revenue growth.Parameters:Increased global warming leading to decreased GDP,slowdown in the economy from increased extreme weather events,increasing pandemics disrupting business,inflation hikes and increased material costs coupled with decreased consumer spending.Rise of middle income consumers in the APAC and Africa region and increased demand for AC's and refrigerators in a continiously warming climate.Customers would demand more energy efficient appliances but it is not clear if they pay extra for such appliances.Access to electricity globally would be slower compared to SDS/NZE Scenarios. Assumptions:Cost of carbon not to increase as rapidly as in SDS/NZE Scenarios,EU ETS like mechanisms and CBAM to be delayed.Voluntary carbon markets to be still significant but at a lower cost.Arçelik to incur increased costs due to increase in physical risks-disruption at the supplier level and company level.Delay in minimum energy efficiency regulations in developing regions where we intende to grow.Increasing costs to design and produce energy efficient appliances despite consumer intention to pay extra. Risks&Opp:We could potentially not be able to reflect increasing costs to consumers, leading to profitability risk.However, we have extensive R&D experience to produce energy efficient appliances,can innovate cost efficient production systems and increase its energy efficient product sales.Extreme weather events could increase risk of other pandemics and supply chain disruptions,causing further inflation hikes and increase production costs.However, our value chain exposure to acute/chronic risks are medium level and resilience plans are put it place.
Transition scenarios: IEA SDS	Company-wide	<Not Applicable>	A qualitative and quantitative approach considering reporting year,2030&2050 years.Scenario in line with RCP 2.6,keeping global warming in line with a well below 2 oC goal.Energy related SDG's are assumed to be met and current net zero pledges are achieved.Arçelik's policy related risks as well as market,new technology risks are increased and climate adaptation risks are minimized.Facts:We have global 2030 Science Based Targets and committed to set a Net Zero 2050 SBT.More than 80% of the GHG emissions of Arçelik comes from the use phase of sold products.Production and sales of energy efficient yet affordable appliances is the key to drive revenue growth.Parameters:Global economic losses due to global warming less impacted compared to a STEPS scenario, limited to c. 0,5% of global GDP.Inflation hikes expected to continue in the near future,increasing raw material costs.Rise of middle income consumers in the APAC and Africa region,and increased access to electricity in least developed regions increasing demand for energy efficient appliances.50% of population increase coming from Africa around 2050,a major market for Arçelik growth.Assumptions:Increased carbon price,rapid introduction of ETS and miminum energy performance standards no later than 2025 in developing regions. Introduction of CBAM no later than 2025,leading to increased steel costs.Increased demand for carbon removal credits pushing voluntary removal credit prices more than EUR 80/ton as of 2030.Increased CAPEX need of Arçelik as of 2025 to invest in renewable energy and energy efficient appliances.Risks:Increasing production costs to produce energy efficient appliances globally on Best Available Technology.Increases in carbon taxes and cost of steel increasing production costs,impacting profitability.Increased reputation risks faced by Arçelik if SBTi targets cannot be met coupled with demand from investors and particularly B2B customers.Increased demand from B2B customers on low carbon products,especially recycled plastics,low carbon steel and energy efficient appliances.Increased risk of rising price of blue carbon credits needed for Net Zero targets.Opportunities: Strong innovative in-house R&D skills to produce most energy efficient products and answer market demand and grow in developing regions.Robust and publicly available decarbonization strategy, more than EUR 500 million green investment to meet SBTi targets.In-house nature based- technology based direct air capture removal know how.
Transition scenarios: Customized publicly available transition scenario	Company-wide	1.5ºC	Arçelik has outsourced S&P to conduct climate-related transition risk analysis in terms of policy risk for its own activities as well as its selected suppliers to understand to potential impact of transition to low-carbon economy based on different scenarios and timelines.A qualitative and quantitative approach considering three time periods (2020 baseline,2030 and 2050).S&P Trucost Carbon Pricing Risk Assesment has been applied to measure the impact of rising carbon prices on Arcelik financial performance. The below mentioned components have been considered to calculate the risks related to Arçelik and its value chain:Carbon Price Database of current carbon taxes, emissions trading schemes and fuel taxes in over 100 geographies.Carbon Price Scenarios,High (below 2oC aligned), Medium(below 2oC aligned delayed action), Low (based on current policy commitments,2-3oC aligned) carbon price scenarios. Projections of Arçelik revenue, OPEX and GHG emissions for future years based on assumptions concerning future growth. Modelling the pass-through of rising carbon prices to a company from its suppliers.According to Analysis, potential climate related transition risks of Arçelik are defined as: the rise in green electricity prices and availability of green electricity in countries where Arçelik operates,potential implications of EU CBAM,EU Green Deal implications on Arçelik operations regarding cost increases in Arçelik's key production inputs such as steel and glass,potential impact on the company's exports from the non-EU countries to the EU,cost up per product to innovate more energy efficient appliances to meet 2030 Science Based Targets and possible introduction of an ETS mechanism in countries in which Arçelik operates.In addition to those risks, rise in voluntary carbon prices especially the carbon removal credit prices following the COP26,costs associated with reducing logistics emissions in the value chain and costs associated with helping suppliers transform to a low carbon economy and reduce raw material emissions for Arçelik production are defined as the medium-long term risks of the company.However, Arçelik has global 2030 Science Based Targets and committed to set a SBTi Net Zero 2050. Arçelik's net-zero roadmap detail publicly available on website.At the supplier level, Arçelik has collected a signed commitment letter from more than 180 of its core 400 suppliers making up more than 90% of purchasing volume to have set GHG reduction targets.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

As Arçelik, we focused on deciding and prioritize climate-related physical risks at the asset level, as well as our suppliers, taking into consideration climate hazard indicators such as water stress, flood, heatwaves, cold waves, hurricane, sea level rise, etc. and their impact on Arçelik's operations. In addition to physical risks, the potential impacts of the transition to a low-carbon economy on Arçelik operations were focused to be analyzed in terms of the policy, market, reputation, and technology risks.

Results of the climate-related scenario analysis with respect to the focal questions

Based on Arçelik's internal analysis and S&P's TruCost Methodology, water stress risks were determined as the most significant risks for Arçelik in terms of physical climate risks. Long-term action plans have been created according to the results of water risk analysis. The physical risk assessments are based on the S&P Trucost Approach, which leverages Arçelik's physical risks by taking into consideration climate hazard indicators such as water stress, flood, heat waves, cold waves, hurricane, and sea-level rise. The Low, Moderate and High RCPs are taken into consideration with a forecast for the 2030 and 2050 fiscal years from a 2020 baseline. According to the Trucost Physical Risk assessment, Arçelik's overall physical risk score is moderate, the main risk being water stress. India, Romania, and Turkey (Ankara and Çayırova) sites are prone to high water stress risk. Based on Trucost analysis, Arçelik's suppliers' main physical risks are also related to water stress. As a risk adaptation plan, we have also set our 2030 target to increase the water recycling and reuse ratio to 70% in all manufacturing plants (excluding JVs) aiming to achieve a closed-loop water system in production. In 2019, as part of the International Finance Corporation's (IFC) Water Efficiency Project, we compared 17 manufacturing plants located in Turkey, Romania, Russia, South Africa, Thailand, and Pakistan according to the industry's best practices in Europe in the IFC database. With the IFC, we identified improvement areas at our manufacturing plants for water efficiency and prepared the Water Efficiency Report. We set our 2030 water target using the outcomes of the report. Within the scope of the target, we aim to reduce water withdrawal per product by 45% in all manufacturing plants (excluding JVs) by 2030 compared to 2015. According to Arçelik's analysis, potential climate-related transition risks of Arçelik are defined as; the rise in green electricity prices and availability of green electricity in countries where Arçelik operates, potential implications of the EU Carbon Border Adjustment Mechanism on the company's operations, EU Green Deal implications on Arçelik operations regarding cost increases in Arçelik's key production inputs such as steel and glass, potential impact on the company's exports from the non-EU countries to the EU, cost up per product to innovate more energy-efficient appliances to meet the mid-term 2030SBTs, possible introduction of an ETS mechanism in countries in which Arçelik has production facilities and the corresponding additional carbon costs for the short-medium term. In addition to those risks, rise in voluntary carbon prices especially the carbon removal credit prices, costs associated with reducing logistics emissions in the value chain and costs associated with helping suppliers transform to a low carbon economy and reduce raw material emissions for Arçelik production are defined as the medium-long term risks of the company.

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	At homes,40% of energy consumption is related to home appliances.Arçelik has a responsibility to produce energy-efficient products in the market to decrease GHG emissions resulting from the use phase.Nearly 90% of Arçelik's downstream emissions results from product use phase.Producing energy-efficient products is critical to decrease Arçelik's Scope 3 emissions.One of Arçelik's approved science-based targets is to reduce Scope 3 emissions from the use of sold products by 15% by 2030 compared to 2018.The new EU Energy Labelling requirements demand products put on the market to be at least 40% energy efficient compared to current ones,and the labeling system changed significantly which provides clear guidance for customers.(A return to A-G label instead of existing A+-A+++ labels).This regulation put Arcelik and the others players in the sector in a challenging position since it requires effective inventory management of the remaining products before the enforcement date of regulation.It also requires an extensive amount of investment in financial resources as well as R&D know-how on how to strategically position our products to serve the requirements of the best energy efficiency labels in the market.Arçelik is well-positioned to respond to regulatory changes for energy-efficient products, starting with the EU Energy Efficiency Legislation.R&D designs less consuming products in terms of both energy and water consumption and carries out projects aimed at efficient use of resources used in products.The cost of R&D studies for energy-efficient and environmentally friendly products is 234.5 million TL in 2021.In the Turkish market, Arçelik organizes "Return to Nature" campaigns where old products put on the market are collected regardless of their brand and changed with new,energy-efficient ones.The old products are sent to Arçelik WEEE (Waste Electrical and Electronic Equipment) recycling plants to be recycled. Between 2014-2021, approximately 195,000 tons of CO2e emission was prevented and 8.1 million tons of water was saved by replacing old products in the market with new ones. As a result of the recycling process, energy-saving is equivalent to 397 GWh. Arçelik was involved in the transformation of energy-efficient refrigerator carbon financing VCS projects in Turkey that 305,407 tons of carbon credits were obtained from it.
Supply chain and/or value chain	Yes	We have an extensive supplier network in terms of approaching sustainability as a business model.The strategy is to transform our suppliers together with us and to share best practices.We will not work with suppliers* without ISO 14001 by 2023,with our suppliers* without ISO 50001 which consumes energy over 1000 ToE by 2025.We started to collect environmental data from suppliers (GHG emissions, energy consumption)&get them to set water, waste, energy, GHG emission reduction targets.As of 2025,we committed to collect environmental data of approx. 400 of our suppliers,corresponding to 90% of our purchasing volume.Quantitative environmental data collection part including GHG emissions is important to emphasize our rationale behind this effort.We conduct this process, Supplier Sust. Data Monitoring in collaboration with a third-party firm. This assessment is made to critical suppliers which are amongst the 90% of purchasing volume significant impact on company operations, critical components provided or being nonsubstitutable.We require all newly commissioned suppliers to conduct self-evaluation audits on environment, quality,ethics.We have approx. 2000(direct) suppliers in more than 60 countries.In 2021,we have 364 critical Tier 1 suppliers (represents 78% of purchasing volume).Total of 215 critical suppliers have been audited, we collected environmental data from 151 suppliers. In 2021,long-term environmental target commitment was received from 183 suppliers to set GHG emission/water/waste/energy efficiency targets.Assessment comprises ESG questions including EMS,compliance with legislation,monitoring,other env.sust. activities.The sustainability risk levels of the suppliers are determined as high, medium, acceptable,good,and excellent.The aim is to understand our suppliers' ESG-related risks and opportunities by collecting and analyzing their data.In 2021, we collected env. data from 151 suppliers,reaching 38% of our target.3rd-party audit findings help identify high-risk suppliers.In 2021,24 suppliers were classified as high-risk (1.19% of total).In 2021, we circulated a Commitment Letter (CL)to our suppliers explaining our sustainability strategy, sustainability credentials,SBT, 2030 environmental targets.We have asked our suppliers to sign the CL,and to commit to setting their own targets for GHG.To date, 183 suppliers have signed the CL.
Investment in R&D	Yes	Arçelik aims to contribute to a sustainable future with environmentally friendly, innovative, and distinguished products. The company works on reducing the environmental impacts of its products with the R&D studies carried out. In this context, resources worth 234.5 million TL in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations were allocated to R&D studies in 2021. In 2021, 51.6% of Arçelik's revenue was generated from the sale of energy-efficient products. While increasing our revenue from eco-friendly products, we also aim to improve product performance on a yearly basis. In 2021, we improved the average energy consumption of washing machine products in Turkey by 20%, and tumble dryer, refrigerators, and dishwashers by 4%, 3.5%, and, 1%, respectively, compared to 2020. As a global household appliance manufacturer operating in a vast geography, Arçelik includes the new energy labels across its refrigerators, washing machines and washer-dryers, dishwashers, and electronic displays to help consumers make more sustainable choices. Arçelik started the process in 2020 and completed the transition in the EU countries in March 2021, providing our EU teams with relevant digital and conventional content to properly inform consumers and ensure targeted stakeholder outreach. Arçelik is also stepping up its efforts to invest in innovation and create more energy-efficient products. Arçelik believes that the new energy labels are another step in the right direction to not only becoming a more sustainable business but also a huge leap forward for the industry and its global brands.
Operations	Yes	Arçelik conducts hundreds of energy efficiency,water efficiency and waste reduction projects in the production process. Arçelik has targets to reduce energy consumption and water withdrawal in production per product by 45% by 2030 compared to 2015.Additionally, absolute Scope 1&2 emissions will be reduced 30% by 2030 compared to 2018 base year inline with Arçelik's approved science-based targets. Arçelik revised its target to increase renewable energy installed capacity by 2030 from 15MW to 50MW. As of 2021,total capacity is reached to 3.2MW. As of 2025, ISO 50001 EnMS certification will be expanded to all its global plants.Arçelik focuses on increasing efficiency through operational improvements, equipment maintenance, and mostly through investments in innovative energy-efficient technologies. To achieve these goals, it will invest minimum 50 million USD in renewable energy and energy efficiency. With energy efficiency projects in Arçelik Global production plants in the last 12 years (2010-21), it has been saved nearly 1.4 Million GJ energy with 2,542 projects. Around 134,000 tCO2e emissions have been prevented since 2010. Arçelik, starting from 2012, has been using green electricity, the supply rate of green electricity in Arçelik Global has reached 69% as of 2021. Arçelik had been using the Implicit Carbon Price Model since 2010. However, in 2020 it was switched to Shadow Price internal carbon pricing mechanism to drive various expenditure decisions that will result in a reduction of Arçelik's Scope 1&2emissions from its global business operations.As of 2021 price for per ton of CO2e carbon is increased to 50EUR from 30EUR. 50 EUR per ton of CO2e applied for investments higher than EUR 50,000 capital cost and 50 kW installed capacity.Additionally, in case Turkey's new Integrated Environmental Directive draft (for EU IPCC implementation) comes into force, there will be potential investment cost for GHG emission mitigation from our own operations. Arçelik's 2050 Net-Zero Road Map: https://www.arcelikglobal.com/en/sustainability/in-touch-with-our-planet/combating-the-climate-crisis/

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	Revenues Direct costs Indirect costs Capital expenditures	Revenues: Arçelik continuously produces appliances with higher energy efficiency classes and aims to increase the percentage of energy-efficient products' turnover in its total revenue. In 2021, 51.6% of Arçelik's revenue was generated through the sale of energy-efficient products. In 2021,Arçelik generated 44% of its revenues from Europe and 41% of its revenues from Turkey.The challenging EU Energy Labelling Requirements requires products put on the EU market to be ever more energy efficient in order to keep up with the GHG emission reduction demands of the EU.We closely follow such legislation and although these requirements are not mandatory in Turkey, we are working with the Turkish Ministry of Energy and Natural Resources to voluntarily produce products in Turkey according to new EU Energy Labelling Requirements.Electricity use will soar as global middle class demands more major domestic appliances such as refrigerators, washing machines,air-conditioners. The challenge comes from keeping up with the rising consumption demand from consumers and balancing it with innovative, sustainable and affordable products in line with SDG 12, Responsible Production and Consumption as well as SDG 7, Affordable and Clean Energy. By shifting to energy-efficient and climate-friendly air conditioners and refrigerators, developing and emerging economies can reduce their annual carbon dioxide emissions by 570 million tons by 2030. With the sale of high energy-efficient refrigerators between 2013-2018 in line with Energy-Efficient Refrigerators Carbon Finance Project carried out in Turkey, 305,407 ton CO2e reductions have been obtained. Following our acquisition of Defy in South Africa in 2011, we have made enormous investments in innovation and product energy efficiency. The average energy efficiency class of our refrigerator sales in S. Africa increased from "E" to "A" in 5 years, that means more than 50% decrease in energy consumption. Now, we have upgraded our refrigerator product range to A+. Direct Costs: Each year we strive to increase efficiency in production in terms of energy efficiency, water management and waste management which also enables reduction in costs. In 2021, with 112 energy efficiency projects carried out only in Turkey, financial savings of around approx. 7.2 Mio TRY were obtained and 5,325 tCO2e GHG emissions were prevented. In comparison to 2010 baseline, energy consumption per product decreased by 46.37%. In line with our mission to create sustainable and innovative products, thanks to our in house R&D formulations, we are also developing innovative solutions from using recycled plastics in production. One example can be the LeoPet Project where we use 500 tons of recycled PET bottles in the washing machine tubs. So, we have helped prevent 1,258 tCO2e emissions. We also achieved cost savings in production. Aside from cost savings, we also need to be cautious of the additional cost burden resulting from either legislative policies, investment demand coupled with pressure from international indices. For instance, due to our science-based targets, we will face additional costs in production while trying to reduce our Scope 3 emissions resulting from the energy consumption of our products during use phase. This might event affect our profitability and revenue. In the same manner, the EU Energy Labelling requirements and other legislative requirements such as potential carbon taxes, increase in the price of green electricity or increasing price of using new technologies instead of natural gas in production might result in increased costs. To mitigate such risks, we factor the probability and impact of such risks into cost calculations while working on our 5-year strategic plans and planning the production scenarios. Indirect Costs: To comply with new regulations which have financial impacts, they are assessed in our financial assessment. E.g. approved GHG emission reports to be prepared and sent to T.R. Ministry of Environment and Urbanization yearly under "The Regulation on Monitoring of GHG Emissions". GHG reports of 2 of Arçelik's production plants which are in the scope of this regulation have been audited and verified by the licenced auditor company. In 2010, before Turkish GHG regulation published, Arçelik established GHG Emissions Management and Reporting System. Since 2010, Arçelik's GHG emissions have been audited and verified by an independent body in "100% verification" and "reasonable assurance" level. Total estimated financial implication for both ISO 14064&Ministry verification process and training are around 85,000 TL for the verification period in 2021. Additionally, environmental and energy studies and projects, and their CAPEX and OPEX values are the main components of our strategical planning process. We develop environmental and energy medium-term strategic plan of each factory and update and monitor it every year. The budgets of environment and energy projects are defined in accordance with this strategic plan. Capital Expenditures: For financial planning purposes, each year, energy efficiency and environmental management budget needs of each production factory are factored into CAPEX/OPEX calculations and the amount spent is monitored. In 2021, we allocated EUR 9.73 million in all our plants in the reporting scope for environmental expenditure and investments. In Romania, built a greenfield factory, Arctic Washing Machine factory which will be equipped with the latest available technology in accordance with Industry 4.0 needs. 1.6MWp solar energy investment as well as investments for rainwater collection, water recycling etc were factored into the CAPEX calculations. Arçelik had been using the Implicit Carbon Price Model since 2010. However, in 2020 it was switched to Shadow Price internal carbon pricing mechanism to drive various expenditure decisions that will result in a reduction of Arçelik's direct and indirect GHG emissions from its global business operations. A price of EUR 50 per ton of CO2e carbon is applied for investments higher than EUR 50,000 capital cost and 50 kW capacity (As of 2021, shadow price is increased to 50 EUR from 30 EUR). In the same manner, we are also working on building an internal water price mechanism to affect the CAPEX approval decision for water efficiency investments. Our commitment to produce sustainable and innovative products results in investments in R&D expenditures. In 2021, 234.5 million TL R&D expenditures were allocated for environmentally friendly products in Turkey, Romania, Russaia, S.Africa, Pakistan, and Thailand operations.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

Yes

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's transition to a 1.5°C world.

Financial Metric

CAPEX

Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)

9

Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)

9

Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)

Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world

The CAPEX in 2021 has been calculated by calculating the "green CAPEX" amount in total CAPEX of Arçelik. Green CAPEX amount includes investments in projects to reduce Scope 1&2&3 emissions, increase the recycled content in the products and packaging (which is related to circular economy and reduction of GHG emissions from purchased goods and services), water management (which is related to water stress), and green chemistry. The same methodology has been used for forecasting the CAPEX for 1.5 C world in 2025.

Financial Metric

OPEX

Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)

0.3

Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)

Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)

Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world

The OPEX in 2021 has been calculated by calculating the "green OPEX" amount in total. Green OPEX amount includes expenditures in projects to reduce Scope 1&2&3 emissions, increase the recycled content in the products and packaging (which is related to circular economy and reduction of GHG emissions from purchased goods and services), water management (which is related to water stress), and green chemistry.

C4. Targets and performance

C4.1

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

Absolute target

Intensity target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2020

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

<Not Applicable>

Base year

2018

Base year Scope 1 emissions covered by target (metric tons CO2e)

85584

Base year Scope 2 emissions covered by target (metric tons CO2e)

77202

Base year Scope 3 emissions covered by target (metric tons CO2e)

<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

162786

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

30

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

113950.2

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

84014

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

46383

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

130397

% of target achieved relative to base year [auto-calculated]

66.3222472038955

Target status in reporting year
Underway

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
Well-below 2°C aligned

Please explain target coverage and identify any exclusions
Our 2030 GHG emissions reduction targets were approved in November 2020 by the Science-Based Targets initiative (SBTi), for working toward a “well-below 2°C” scenario in line with the Paris Agreement. We commit to reducing our absolute Scope 1 and 2 GHG emissions by 30% by 2030 from the 2018 base year, and our target is approved by SBTi. This target covers 100% of company-wide Scope 1-2 emissions. Base year and reporting year emissions shared above are company-wide total Scope 1&2 emissions.

Plan for achieving target, and progress made to the end of the reporting year
Arçelik reduced its consolidated Scope 1&2 emissions by 20% as of 2021 when compared 2018 base year for its science-based target. So, 66% of the target has been achieved. Arçelik aims to achieve its SBTs for Scope 1&2 by increasing green electricity procurement to 100% globally as of 2030 with Energy Attribute Certificates and long-term Power Purchasing Agreement (PPA); investing further in energy efficiency projects in production; transition to 100% electric vehicles and forklifts; transition to low GWP refrigerant usage in production; and use of green hydrogens where possible. Please see our low carbon transition plan for 2030 and 2050 shared publicly on our website: https://www.arcelikglobal.com/en/sustainability/in-touch-with-our-planet/combating-the-climate-crisis/

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 2

Year target was set
2020

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 11: Use of sold products

Base year
2018

Base year Scope 1 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 2 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3 emissions covered by target (metric tons CO2e)
22921834

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
22921834

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
<Not Applicable>

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
<Not Applicable>

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
80.5

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
80.5

Target year
2030

Targeted reduction from base year (%)
15

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
19483558.9

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
19952288.02

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
19952288.02

% of target achieved relative to base year [auto-calculated]
86.3673177285901

Target status in reporting year
Underway

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
2°C aligned

Please explain target coverage and identify any exclusions
Our 2030 GHG emissions reduction targets were approved in November 2020 by the Science-Based Targets initiative (SBTi), for working toward a "2°C aligned" scenario in line with the Paris Agreement. We commit to reducing our absolute Scope 3 GHG emissions from the use of sold products by 15% by 2030 from the 2018 base year. This target covers company-wide Scope 3 emissions from the use of the sold products. The products included in the target are washing machine, dishwasher, tumble dryer, freezer, refrigerator, oven, and TV. Base year and reporting year emissions shared above are company-wide total Scope 3 emissions from use of sold products. Since Scope 3 emissions from the use of sold products are 80.5% of total Scope 3 emissions, the target has been set for the GHG emissions from the use of sold products. Other Scope 3 emissions such as from purchased goods and services, upstream and downstream transportation, etc. have been excluded.

Plan for achieving target, and progress made to the end of the reporting year
Arçelik reduced its Scope 3 emissions from use of sold products by 13% as of 2021 when compared 2018 base year for its science-based target. So, 86% of the target has been achieved. Arçelik aims to achieve its SBTs for Scope 3 (use of sold products) by increasing penetration of super-energy-efficient products globally; and accelerating the phase-out of high-GWP refrigerants with the transition to the low-GWP refrigerants in all its products Some examples of the planned projects for realizing the target are; refrigerators comprising low thermal conductivity insulators (<10 mW/m°K), entirely VIP based insulation, injectable aerogel applications (3 mW/m°K), new and novel heat pump technologies, VCC compressors with higher performance, etc., using non-fluorinated refrigerant heat pump systems in all washing machines and dishwashers, working in close collaboration with direct material, OEM, and logistics suppliers to reduce their GHG footprint. Please see our low carbon transition plan for 2030 and 2050 shared publicly on our website: https://www.arcelikglobal.com/en/sustainability/in-touch-with-our-planet/combating-the-climate-crisis/

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 3

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2
Scope 3

Scope 2 accounting method
Location-based

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 5: Waste generated in operations
Category 6: Business travel
Category 7: Employee commuting
Category 9: Downstream transportation and distribution
Category 11: Use of sold products
Category 12: End-of-life treatment of sold products
Other (upstream)
Other (downstream)

Base year
2018

Base year Scope 1 emissions covered by target (metric tons CO2e)
85584

Base year Scope 2 emissions covered by target (metric tons CO2e)
77202

Base year Scope 3 emissions covered by target (metric tons CO2e)
28467509.33

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
28630295

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
100

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year

2050

Targeted reduction from base year (%)
90

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
2863029.5

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
84014

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
46383

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
26413811

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
26554208

% of target achieved relative to base year [auto-calculated]
8.05707148086785

Target status in reporting year
Underway

Is this a science-based target?
Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

Target ambition
Other, please specify (This is Arçelik's 2050 Net Zero Target.)

Please explain target coverage and identify any exclusions
We commit to reaching net-zero emissions in the value chain by 2050. This target covers 100% of company-wide Scope 1&2&3 emissions. Base year and reporting year emissions shared above are company-wide total Scope 1&2&3 emissions (not only GHG emissions of Turkey operations). GHG emissions from joint ventures are excluded. As Arçelik, in March 2022 we committed to the Science-Based Target Initiative (SBTi) to setting our net-zero emission target in accordance with the science-based net-zero standard. So within the next two years, we will submit our science-based aligned net-zero target to SBTi.

Plan for achieving target, and progress made to the end of the reporting year
We will reduce our Scope 1 and Scope 2 emissions by establishing renewable energy plants, transitioning to electrical company cars and forklifts, using low GWP refrigerants in the production etc. To reduce our Scope 3 emissions, we will increase the penetration of energy-efficient products in the market, increase our recycled material contents in the products, use alternative low-carbon fuel for product logistics, etc. By doing so, we will reduce our total Scope 1&2&3 emissions by 90% as of 2050. To offset our residual emissions (around 10% of total emissions), we will apply plantation and other nature-based solutions to become a net-zero company in 2050. We shared our 2050 net-zero road map in the given link below: https://www.arcelikglobal.com/en/sustainability/in-touch-with-our-planet/combating-the-climate-crisis/

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2
Scope 3

Scope 2 accounting method
Location-based

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 5: Waste generated in operations
Category 6: Business travel
Category 7: Employee commuting
Category 9: Downstream transportation and distribution
Category 11: Use of sold products
Category 12: End-of-life treatment of sold products
Other (upstream)
Other (downstream)

Intensity metric
Metric tons CO2e per unit revenue

Base year
2018

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
0.00000443

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
0.000004

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)
0.00147448

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.001482908

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure
100

% of total base year emissions in all selected Scopes covered by this intensity figure
100

Target year
2050

Targeted reduction from base year (%)
90

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.0001482908

% change anticipated in absolute Scope 1+2 emissions
-90

% change anticipated in absolute Scope 3 emissions
-90

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
0.00000182

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
0.000001

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)
0.00057128

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.0005741

% of target achieved relative to base year [auto-calculated]
68.0950312943666

Target status in reporting year
Underway

Is this a science-based target?
Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

Target ambition
1.5°C aligned

Please explain target coverage and identify any exclusions
We commit to reaching net-zero emissions in the value chain by 2050. This target covers 100% of company-wide Scope 1&2&3 emissions. Base year and reporting year emissions shared above are company-wide total Scope 1&2&3 emissions (not only GHG emissions of Turkey operations). In addition to absolute GHG emissions, we follow our net-zero target as per revenue as an intensity target. GHG emissions from joint ventures are excluded. As Arçelik, in March 2022 we are committed to setting our net-zero emission target in accordance with the science-based net-zero standard. So within the next two years, we will submit our science-based aligned net-zero target to the Science-Based Target Initiative (SBTi).

Plan for achieving target, and progress made to the end of the reporting year
We will reduce our Scope 1 and Scope 2 emissions by establishing renewable energy plants, transitioning to electrical company cars and forklifts, using low GWP refrigerants in the production etc. To reduce our Scope 3 emissions, we will increase the penetration of energy-efficient products in the market, increase our recycled material contents in the products, use alternative low-carbon fuel for product logistics, etc. By doing so, we will reduce our total Scope 1&2&3 emissions by 90% as of 2050. To offset our residual emissions (around 10% of total emissions), we will apply plantation and other nature-based solutions to become a net-zero company in 2050. We shared our 2050 net-zero road map in the given link below: https://www.arcelikglobal.com/en/sustainability/in-touch-with-our-planet/combating-the-climate-crisis/

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production
Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2019

Target coverage
Company-wide

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2019

Consumption or production of selected energy carrier in base year (MWh)
314537

% share of low-carbon or renewable energy in base year
71.9

Target year
2030

% share of low-carbon or renewable energy in target year
100

% share of low-carbon or renewable energy in reporting year
68

% of target achieved relative to base year [auto-calculated]
-13.8790035587189

Target status in reporting year
Underway

Is this target part of an emissions target?
Yes, the result of this target (Low 1) will affect ourother emission-reduction targets.

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

Please explain target coverage and identify any exclusions
All Arçelik Global production facilities* are included in the scope. *Only Arçelik LG Air Conditioner Plant has not been included yet, but it will be included in the scope in upcoming years.

Plan for achieving target, and progress made to the end of the reporting year
Arçelik aims to supply all the consumed electricity in all manufacturing plants as green electricity (generated from renewable energy sources) by 2030. Although the progress seems to decrease in green electricity supplying, Arçelik expand its boundaries by acquiring new production plants in the reporting year. In 2019, the total global consumed electricity was 314,537 MWh and 71.9% of total consumed electricity was green electricity which equals 226,019 MWh. However, in 2021 the total consumed electricity is 360,628 MWh* and 68% of total consumed electricity is green electricity which equals 259,109 MWh. It can be seen clearly that, the absolute green electricity amount is increased. We have expanded our green electricity scope . Besides Turkey and Romania operations (we have reached 100% ratio in both Turkey and Romania operations), in 2021 Beko LLC Russia Plant's around 20% of total consumed electricity is supplied I-REC certified green electricity, and Arçelik-Hitachi Thailand Plant's 20% of total consumed electicity is supplied as green electricity by a long term PPA with floating solar power plant. We have long term plan to increase our green electricity ratio year by year. * Arçelik Global production plants' electricity consumption in 2021.

List the actions which contributed most to achieving this target
<Not Applicable>

Target reference number
Low 2

Year target was set
2019

Target coverage
Company-wide

Target type: energy carrier
Electricity

Target type: activity
Production

Target type: energy source
Renewable energy source(s) only

Base year

2019

Consumption or production of selected energy carrier in base year (MWh)
731

% share of low-carbon or renewable energy in base year
0.2

Target year
2030

% share of low-carbon or renewable energy in target year
12.4

% share of low-carbon or renewable energy in reporting year
0.3

% of target achieved relative to base year [auto-calculated]
0.819672131147541

Target status in reporting year
Revised

Is this target part of an emissions target?
Yes, the result of this target (Low 1) will affect our other GHG Emission targets.

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

Please explain target coverage and identify any exclusions
Arçelik's all global production facilities are included in the scope.

Plan for achieving target, and progress made to the end of the reporting year
Our first target was to reach 15 MW in terms of installed renewable energy capacity when we define this target on 2019. According to our new challenging road map, we revise our 2030 target as having 50 MW installed renewable energy capacity. We have created a Renewable Energy Road Map and initiated the feasibility studies in all our global production plants. In reporting period, 1.16 MW installed capacity PV system and a pilot PV system with 0.1 MW capacity have been commissioned in Eskişehir Refrigerator Plant, Turkey and Jacobs Cooking Appliances Plant in Durban, South Africa respectively. Total capacity is reached to 3.26 MW as of 2021.

List the actions which contributed most to achieving this target
<Not Applicable>

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
2019

Target coverage
Company-wide

Target type: absolute or intensity
Intensity

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

Energy consumption or efficiency	toe

Target denominator (intensity targets only)
unit of production

Base year
2015

Figure or percentage in base year
0

Target year
2030

Figure or percentage in target year
45

Figure or percentage in reporting year
18.7

% of target achieved relative to base year [auto-calculated]
41.5555555555556

Target status in reporting year
Underway

Is this target part of an emissions target?

Yes, the result of this target (Oth 1) will affect our other targets.

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

Please explain target coverage and identify any exclusions
Arçelik has a target to reduce its energy consumption per product in all global operations* by 45% in 2030, in comparison with the base year of 2015. As of 2021, 18.7% reduction has been provided. Arçelik Sustainability Report 2020 pg.59 https://www.arcelikglobal.com/media/6347/sustainability_report_2020.pdf * Arçelik-LG Air Conditioner Plant has not been included in the scope yet, but it will be included in the scope in upcoming years.

Plan for achieving target, and progress made to the end of the reporting year
We invest in improvement and better alternatives for energy efficiency. We continue our work in areas such as energy efficiency, insulation, heat recovery, energy efficient motor transition and process optimisation in compressed air, heating, ventilation, and air conditioning systems and lighting systems. We implemented a total of 228 energy-efficiency projects at our production facilities within the scope of the Sustainability Report 2021, saving approximately 63,000 GJ of energy. Thanks to this increase in efficiency, we prevented 5,514 tons of CO2 e emissions and achieved a financial savings of EUR 773,932. We define our energy efficiency projects with global workshops with brainstorming sessions and roll out the best practices through the global production plants systematically in each year. Sustainability Report 2021 pg.47 https://www.arcelikglobal.com/media/6938/arcelik21_sustainability_report.pdf

List the actions which contributed most to achieving this target
<Not Applicable>

Target reference number
Oth 2

Year target was set
2021

Target coverage
Company-wide

Target type: absolute or intensity
Intensity

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

Energy productivity	units of revenue

Target denominator (intensity targets only)
GJ

Base year
2010

Figure or percentage in base year
0

Target year
2030

Figure or percentage in target year
100

Figure or percentage in reporting year
61.9

% of target achieved relative to base year [auto-calculated]
61.9

Target status in reporting year
New

Is this target part of an emissions target?
Yes, the result of this target (Oth 2) will affect our other emission-related targets.

Is this target part of an overarching initiative?
EP100

Please explain target coverage and identify any exclusions
Arçelik Global's, all (Turkey*, Romania, Russia, South Africa, Pakistan, Thailand, Bangladesh, India and China) operations are included. * Arçelik-LG Air Conditioner Plant has not been included in the scope yet, but it will be included in the scope in upcoming years.

Plan for achieving target, and progress made to the end of the reporting year
We have become a member of EP100, led by Climate Group. EP100 brings together more than 120 energy-smart companies committed to using energy more productively. Through this membership, we are committed to doubling our economic output for every unit of energy we consume globally by 2030, compared to 2010, by increasing energy efficiency. In line with our SBTi targets, we have long term plan for all global manufacturing plants to reach the target. We implemented a total of 228 energy-efficiency projects at our production facilities within the scope of the Sustainability Report 2021, saving approximately 63,000 GJ of energy. Thanks to this increase in efficiency, we prevented 5,514 tons of CO2 e emissions and achieved a financial savings of EUR 773,932.

List the actions which contributed most to achieving this target
<Not Applicable>

Target reference number
Oth 3

Year target was set
2021

Target coverage
Company-wide

Target type: absolute or intensity
Absolute

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

Energy productivity	Other, please specify (Percentage of ISO 50001 EnMS Certified Production Plants)

Target denominator (intensity targets only)
<Not Applicable>

Base year
2019

Figure or percentage in base year
52

Target year
2025

Figure or percentage in target year
100

Figure or percentage in reporting year
58

% of target achieved relative to base year [auto-calculated]
12.5

Target status in reporting year
New

Is this target part of an emissions target?
Yes, the result of this target (Oth 2) will affect our other emission-related targets.

Is this target part of an overarching initiative?
EP100

Please explain target coverage and identify any exclusions
Arçelik Global's, all (Turkey, Romania, Russia, South Africa, Pakistan, Thailand, Bangladesh, India and China) operations are included.

Plan for achieving target, and progress made to the end of the reporting year
As of 2021, 58% of Arçelik factories have ISO 50001 Energy Management Certificate (HQ included). As a member of EP100, Arçelik has committed to increasing the ISO50001 certified factories to 100%. In 2021 our 2 plants in Pakistan out of 3 have been certified. We have a road map to increase our ISO 50001 EnMS coverage and reach 100% by 2025. Sustainability Report 2021 pg. 47 and pg. 20 https://www.arcelikglobal.com/media/6938/arcelik21_sustainability_report.pdf

List the actions which contributed most to achieving this target
<Not Applicable>

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	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	230	13002
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
4215

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
6854360

Investment required (unit currency – as specified in C0.4)
6662999

Payback period
<1 year

Estimated lifetime of the initiative
11-15 years

Comment
Process optimisation projects are usually low-budget activities, thus they have short-term payback periods such as implementing new sensors, monitoring devices in several areas, reducing the cycle times of the processes, changing or cancelling the unnecessary operations to provide the same work with less energy consumption. As Arçelik, we analyse our processes and implement optimisation projects to decrease our base consumption.

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
571

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
908507

Investment required (unit currency – as specified in C0.4)
1716872

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Lighting projects include the changing of inefficient lighting fixtures (fluorescent, metal-halide lamps) with LED technology, using the motion and presence sensors to reduce the consumption when there is no occupancy, increasing the daylight utilization in plants etc.

Initiative category & Initiative type

Energy efficiency in production processes	Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)
1538

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2365797

Investment required (unit currency – as specified in C0.4)
3991290

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Compression losses can be reduced by using fittings with low losses, revising and optimising the pipeline and compressor rooms, reducing the number of equipment which use compressed air, reducing the set pressure of air compressors, making regular checks for leak detection and making compressed air production more effective. Most of the initiatives can be implemented with low financial investments or no budget required, and lifetime of application is usually long.

Initiative category & Initiative type

Energy efficiency in production processes	Automation

Estimated annual CO2e savings (metric tonnes CO2e)
420

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
587823

Investment required (unit currency – as specified in C0.4)
809203

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Automation projects are usually low budget activities. Thus they have short-term payback periods; such as adding new sensors or monitoring devices in several areas, adapting the automation codes and algorithms to the equipment and SCADA. Projects, which are categorised as automation as follows; preventing the redundant energy consumption of machines/equipment during non-production times and inactive hours (such as brake times).

Initiative category & Initiative type

Energy efficiency in production processes	Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)
354

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
592228

Investment required (unit currency – as specified in C0.4)
1669828

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
As Arçelik, we generally use new energy efficient electric motors in IE3 and IE4 classes. To decrease the mechanical losses and increase the efficiency we have implemented permanent magnet motor technology in some projects. We also apply inverters to electric motors which have varying loads according to their feasibility.

Initiative category & Initiative type

Energy efficiency in production processes	Other, please specify (Insulation)

Estimated annual CO2e savings (metric tonnes CO2e)
366

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
425315

Investment required (unit currency – as specified in C0.4)
269486

Payback period
<1 year

Estimated lifetime of the initiative

6-10 years

Comment
Insulation of exposed pipings, boilers, drying ovens with materials which have low thermal conductivity. As Arçelik, we conduct periodical controls to check the insulations of process pipelines, machines/equipment, auxiliary facilities with thermal imaging systems to find and execute the insulation activities. Insulation of exposed surfaces can help to reduce the heat leakages, that brings out the reduction of energy consumption (both for cooling and heating side). Furthermore, insulation of cooling pipelines prevents the pipings from corrosion as well.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)
325

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
379009

Investment required (unit currency – as specified in C0.4)
449848

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Implementing high efficient HVAC technologies reduce the GHG emmissions and energy consumption while improving the indoor air quality. As Arçelik, we are following and if applicable, implementing the new technologies in HVAC equipment just like in other improvement activities. (Such as using variable speed A/C fans, improvement of funnel ventilation, using dehumidifiers instead of A/C plants, using new and high efficient technologies, using air curtains to prevent conditioned air leakages etc.)

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
1016

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
1443144

Investment required (unit currency – as specified in C0.4)
9875446

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment
High efficient technologies can help to reduce the energy consumption during their lifetime. Life cycle cost analyse is one of the important decision criteria while procuring an equipment in Arçelik. Since 2020, we have switched to Shadow Carbon Price mechanism from Implicit Carbon Price mechanism. Thus, we are choosing low-carbon technology equipment in our operations.

Initiative category & Initiative type

Energy efficiency in production processes	Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)
268

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
437753

Investment required (unit currency – as specified in C0.4)
468513

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Implementing high efficient, innovative and new cooling technologies in production processes can increase the energy efficiency and help to reduce GHG emissions. Taking advantages of free cooling technologies by revising the pipeline and implementing additional equipment leads us to cancelling the chillers in mid-season or implementing heat pumps where both heating and cooling demands have to bet met, can help us to decrease natural gas consumption and increase the cooling systems' efficiency.

Initiative category & Initiative type

Energy efficiency in buildings	Insulation

Estimated annual CO2e savings (metric tonnes CO2e)
118

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
152254

Investment required (unit currency – as specified in C0.4)
943789

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment
Insulation of exposed building surfaces can help to reduce the heat leakages and prevent thermal bridges, that brings out the reduction of energy consumption (both for cooling and heating side). As Arçelik, we check the building insulations with thermal imaging cameras periodically, and maintaine or renew the necessary spots.

Initiative category & Initiative type

Energy efficiency in production processes	Waste heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)
147

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
175272

Investment required (unit currency – as specified in C0.4)
323479

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Heat recovery is the process by which heat would be lost in processes is recovered and used somewhere else, improving the energy efficiency of the processes and facility. With adding some new equipment and making some changes/revisions in pipelines, it is possible to use the waste heat.

Initiative category & Initiative type

Energy efficiency in production processes	Electrification

Estimated annual CO2e savings (metric tonnes CO2e)
239

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
120733

Investment required (unit currency – as specified in C0.4)
126728

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Changing the heat source from non-renewable fuels to electricity leads to decrease in GHG emissions and increase the efficiency of the proces by advanced control systems of the equipment itself.

Initiative category & Initiative type

Energy efficiency in buildings	Building Energy Management Systems (BEMS)

Estimated annual CO2e savings (metric tonnes CO2e)
44

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
65521

Investment required (unit currency – as specified in C0.4)
94600

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Building Energy Management Systems can help to increase the efficiency of buildings (HQ, factory building, auxiliary facilities etc) by controlling the HVAC and lighting systems with integrated control equipment such as timers, lighting automation with daylight sensors, presence sensors etc. BEM systems provide reports and enable us to monitoring the real time consumption.

Initiative category & Initiative type

Low-carbon energy generation	Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)
125

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
92517

Investment required (unit currency – as specified in C0.4)
572761

Payback period
4-10 years

Estimated lifetime of the initiative
21-30 years

Comment
According to our targets, we are increasing our installed capacity in renewables. Only new investments during the reporting year are disclosed as Emission Reduction Initiatives. Existing renewable energy systems are not included in the emission reduction activity, however their generations are included in to the related question about electricity generation and consumption (C8.2)

Initiative category & Initiative type

Waste reduction and material circularity	Product/component/material recycling

Estimated annual CO2e savings (metric tonnes CO2e)
1258

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 3 category 1: Purchased goods & services

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
419825

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

Payback period
No payback

Estimated lifetime of the initiative
6-10 years

Comment
With the innovative products we offer and the improvements we make in our operations, we strive to protect natural resources in the world and to reduce our environmental footprint. To produce solutions for global environmental problems such as the climate crisis, plastic pollution, we integrate sustainability into the products we develop. Arçelik has a Central R&D department which develops recycled material formulation to reduce virgin plastic use as well as raw material consumption. We contribute to the circular economy with our innovative products and materials and aim to increase the use of alternative materials. Arçelik develops projects to recycle materials via the innovative technologies it develops. In one of these project named LeoPet, Arçelik uses recycled PET bottles. Starting this project in 2017, Arçelik developed the Leopet raw material by using recycled waste PET bottles to show how waste material can be transformed into a valuable alternative raw material. In 2021, 500 tons of recycled PET has been used in the scope of this project, and 1,258 tons of GHG emissions has been prevented by using recycled material instead of virgin ones. The project does not have specific investments, the recycled material cost is reflected either as saving or a cost up in the cost of production.

Initiative category & Initiative type

Waste reduction and material circularity	Remanufacturing

Estimated annual CO2e savings (metric tonnes CO2e)
1998

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 3 category 12: End-of-life treatment of sold products

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
92000000

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

Payback period
No payback

Estimated lifetime of the initiative
<1 year

Comment
All production plants in Turkey have their own remanufacturing operations. In 2021, the number of remanufactured products is approx. 40,000 in our remanufacturing places in the production plants which means that we prevent these products to become waste electrical and electronics equipment (WEEE). By doing so, we have saved approximately 1,998 tons of CO2e. The project does not have specific investments.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Arçelik complies with legal legislation on GHG emission reduction and fully comply with eco-design legal legislation which describes product energy efficiency limits. Thanks to membership in APPLiA (Home Appliance Manufacturers Association in EU) we participate in all operations carried out in EU regarding product energy performances and labelling and developments are closely followed. Arcelik has a close relationship with all relevant ministry departments and work together on the implementation of EU regulations to Turkish regulations system. Energy efficiency operations in production are performed in accordance with all legal requirements described at Turkish Energy Efficiency Act. Greenhouse gas emission mitigation is achieved with energy efficiency operations at the product and production levels.
Dedicated budget for energy efficiency	Annually, energy budgets and energy efficiency investment budgets are allocated, and projects are realized according to allocated budgets. Targets to reduce energy consumption are set at the beginning of each year and compliance with the planned target is monitored systematically and periodically. GHG emission reduction is calculated, followed up systematically and periodically as well.
Dedicated budget for low-carbon product R&D	Arçelik's R&D Departments design innovative and environmentally friendly products with less energy and water consumption in use-phase while they provide resource efficiency in the production phase by decreasing raw material consumption and increasing recycled content in the products. Currently, Arçelik holds a number of records about white goods consuming the least energy.
Financial optimization calculations	Arçelik performs operations to optimize the energy consumption. Financial optimizations are made about energy efficiency and road for investment is paved. Short and medium term energy efficiency projects are constantly followed; financial optimization is made and put into practice in a short span of time.
Marginal abatement cost curve	Energy related expense items are followed and reduction targets are set. While increase in production is targeted, goals for decline in energy consumption and energy budgets are set.
Partnering with governments on technology development	In order to increase energy efficiency in products and production, joint works with both governmental agencies and universities are performed. Projects are carried out with TÜBİTAK (The Scientific and Technological Research Council of Turkey), energy-efficient products and production technologies are developed. Projects are carried out also under European Union Framework Programs. In addition, many projects are carried out with both state and foundation universities and operations for increasing efficiency in product and production are carried out. Various cooperation projects are also carried out with Ministries.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon
Other, please specify (2009/125/EC and 2010/30/EU Directives)

Type of product(s) or service(s)

Other	Other, please specify (White good and electronic products (washing machine, dishwasher, tumble dryer, refrigerator, freezer, oven, TV))

Description of product(s) or service(s)
Description of Arçelik's low carbon products is that the products which consume less energy & water than the lowest "allowable" energy and water efficiency classes. Our low-carbon products contribute to the low-carbon economy and have avoided emissions for third parties (such as our customers). We focus on decreasing the overall energy use of our products, helping our customers ensure financial savings while reducing energy consumption and GHG emissions. In 2021, 51.6% of our turnover was from our energy-efficient products. While increasing our revenue from eco-friendly products, we also aim to improve product performance on a yearly basis. In 2021, we improved the average energy consumption of washing machines inTurkey by 20%, and tumble dryers, refrigerators, and dishwashers by 4%, 3.5%, and, 1%, respectively, compared to 2020.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
Yes

Methodology used to calculate avoided emissions
Other, please specify (Electricity saving (kWh) (electricity consumption reduction between 2020 and 2021 due to our sold low-carbon products) is multiplied with the electricity emissions factor (kg CO2e/kWh) of Turkey to calculate the total avoided GHG emissions.)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Use stage

Functional unit used
Usage of the low-carbon products in 2021

Reference product/service or baseline scenario used
Our baseline products are the products that consume the lowest "allowable" energy and water efficiency classes in the market.

Life cycle stage(s) covered for the reference product/service or baseline scenario
Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
12599

Explain your calculation of avoided emissions, including any assumptions
Avoided emissions are calculated by using electricity consumption reduction between 2020 and 2021 due to our sold low-carbon products. We multiply electricity saving (kWh) with the electricity emissions factor (kg CO2e/kWh) of Turkey to calculate the total avoided GHG emissions. The electricity emission factor is estimated the same (electricity emission factor of Turkey in 2021 supplied by IEA) for all products. Avoided emissions for third parties (consumers) from these products in 2021 have been calculated as 12,599 tons.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
51.6

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?
No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?
No

Name of organization(s) acquired, divested from, or merged with
<Not Applicable>

Details of structural change(s), including completion dates
<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	No	<Not Applicable>

C5.2

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

Scope 1

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
81550

Comment
Scope 1 GHG emissions in the base year 2019 in Arçelik's Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations have been calculated as 81,550 metric tons of CO2e according to ISO 14064-1 Standard.

Scope 2 (location-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
52950

Comment
Scope 2 (location-based) GHG emissions in the base year 2019 in Arçelik's Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations have been calculated as 52,950 metric tons of CO2e according to ISO 14064-1 Standard.

Scope 2 (market-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment
Market-based Scope 2 emissions have been calculated as zero since the electricity is supplied from renewable sources.

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
2729955

Comment
The sources of indirect GHG emissions from products used by the organization are raw materials, materials, and packaging materials used in Arçelik's sold products. The amounts are calculated by choosing the most sold product as the reference model. The products which are taken into Arçelik's GHG inventory are washing machine, dishwasher, refrigerator, top table refrigerator, tumble dryer, oven, hob, hood, air conditioner, and water dispanser produced in Arçelik's production plants in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand. GHG emissions caused by used materials such as plastics, metals, dyes, chemicals, and other parts of the products are calculated by using the weight, sold product number, and emission factors of used materials. Material data (material types and weights) are collected from product BoM lists, R&D, and other related departments. Emissions factors are mainly taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2020 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Scope 3 category 2: Capital goods

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
The capital goods are not relevant for Arçelik. Because our owned capital goods' emissions are estimated to be at a negligible quantity of our total emissions in 2020.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
All Scope 1 and Scope 2 emissions of our activities are calculated. There are no emissions out of Scope 1 and Scope 2 such as heat, steam, etc.

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
GHG emissions from upstream transportation and distribution have not been calculated yet.

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
4204

Comment
Greenhouse gas emissions emitted during recycling or disposal of wastes generated in the production have been calculated by multiplying waste amounts and emissions factors of waste recycling or disposal processes by type. Waste amount data is collected from production areas. Emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2020 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Scope 3 category 6: Business travel

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
6534

Comment
Indirect GHG emissions from business travel include GHG emissions from international and domestic travel by road, railway, and airways. 100% of business travels in Arçelik Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations are included in the emission calculation. Distances are calculated by Google Maps Tool, and emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2020 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Scope 3 category 7: Employee commuting

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
85767

Comment
Indirect GHG emissions from employee commuting include GHG emissions from domestic transportation of employees from home to factories and back. 100% of the employee commuting in Arçelik Turkey operations are included in the emission calculation. Distances, routes, and employee numbers are taken from Administration Department (due to contract with service contractor), and emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2019 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Scope 3 category 8: Upstream leased assets

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
We have no leased assets for storing supplied materials from suppliers.

Scope 3 category 9: Downstream transportation and distribution

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
180888

Comment
EPA Center for Corporate Climate Leadership GHG Emission Factors Hub Emission Factors for Greenhouse Gas Inventories. The emission factors are taken from Table 9: Product Transport Emission Factors. All calculations are completed in accordance with ISO 14064-1:2010 and verified in accordance with ISO 14064-3 standards.

Scope 3 category 10: Processing of sold products

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
We produce and sell the final products. Due to that reason, the processing of sold products is not relevant.

Scope 3 category 11: Use of sold products

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
22040094

Comment
Indirect GHG emissions associated with the use of products are the emissions generated during the use-phase of Arçelik's sold products in 2020 in 10 years lifetime. Products that are taken in the scope of this GHG category are washing machine, dishwasher, refrigerator, freezer, tumble dryer, oven, hob, hood, air conditioners, Turkish coffee machine, and tea-maker that are produced in Arçelik's in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations. In addition to these products, outsourced products such as hairdryer, iron, toaster, kettle, microwave oven, vacuum cleaner, electric kettle, water dispenser, and outsourced white goods are supplied from different countries and sold to different countries are also calculated and added to Arçelik's GHG amount. GHG emissions generated from electricity and gas consumption of the products, and GHG emissions generated from refrigerant leakage from the product for 10 years lifetime are calculated. The energy consumption of the products is taken from energy labels. Gas capacity of refrigerators, freezers, air conditioners, and tumble dryers is used to calculate GHG emissions from refrigerant leakage. Country-specific electricity emission factors from the International Energy Agency (IEA) for 90% of countries where most of the products were sold are chosen according to the customer's countries of the sold products. For the rest, the average world electricity emission factor is used. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Scope 3 category 12: End of life treatment of sold products

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
19127

Comment
GHG emissions in this category are generated by the recycling and/or disposal process of waste electrical and electronics equipment (WEEE) when 10 years lifetime period of our sold products is ended. The products which are taken into Arçelik's GHG inventory are washing machine, dishwasher, refrigerator, top table refrigerator, tumble dryer, oven, hob, hood, air conditioners, and water dispansers produced in Arçelik's production plants in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations. GHG emissions are calculated by multiplying product weights (as WEEE) and WEEE recycling emission factors. The weights of the products are collected from product BoM lists, R&D, and other related departments. Emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2020 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Scope 3 category 13: Downstream leased assets

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
GHG emissions from downstream leased assets have not been calculated yet. GHG emissions in this category are not significant.

Scope 3 category 14: Franchises

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
Since Arçelik does not have franchises, the GHG emissions from this category have been calculated as zero.

Scope 3 category 15: Investments

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
0

Comment
GHG emissions of Arçelik's new factory investments is accounted in Arçelik's Scope 1&2 emissions. So, GHG emissions of factory investments are not relevant for Scope 3 emissions.

Scope 3: Other (upstream)

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
19

Comment
GHG emissions from biological wastewater treatment processes in wastewater treatment plants of industrial zone or municipalities have been calculated and reported in this section. Chemical oxygen demand (COD) of biological wastewaters in our production plants, biological wastewater amount, and emission factors from 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories - Volume 5: Waste- Chapter 6:WASTEWATER TREATMENT AND DISCHARGE are used to calculate the GHG emissions from there. In addition to this, GHG emissions of mobile combustion of our supplier in Arctic production plant has been added in this section. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Scope 3: Other (downstream)

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
7282

Comment
GHG emissions from the treatment of packaging of the sold products have been calculated and reported in this section. The amounts are calculated by choosing a reference model. The products which are taken into Arçelik's GHG inventory are washing machine, dishwasher, refrigerator, top table refrigerator, tumble dryer, oven, hob, hood, air conditioners, and water dispansers produced in Arçelik's production plants in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand. GHG emissions caused by the treatment of packaging materials of sold products are calculated by using the weight, sold product number and emission factors of treatment methods of packaging materials. Emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2020 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
ISO 14064-1

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)
84014

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Arçelik's Scope 1 emissions in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations have been calculated and verified as 84,014 tons of CO2e in 2021.

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
Our Scope 2 (location-based) emissions are emitted from grid electricity, and they are calculated by using the grid electricity emission factor and verified by an independent third-party organization. Our Scope 2 (market-based) emissions are only emitted from the electricity supplied from renewable energy sources, and they are verified as "0" (zero) by an independent third-party organization.

C6.3

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

Reporting year

Scope 2, location-based
46383

Scope 2, market-based (if applicable)
0

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
For the reporting period between 01.01.2021 to 31.12.2021, 100% of electricity used in Turkey for Arçelik HQ and production plants in Turkey, production plants in Romania, and 21.3% of electricity used in Russia production plant has been purchased from different renewable energy plants. The redemption statements were produced for all Arçelik locations that are in reporting scope of CDP 2022 by the electricity supplier. Location-based Scope 2 emissions are calculated by using country-based electricity emission factors of the countries which are in the scope of Arçelik GHG reporting from IEA for 2021 (for Arçelik's production plants in Russia, South Africa, Pakistan, and Thailand reported in this report). Market-based Scope 2 emissions are calculated and verified as zero by an independent third-party organization. The emission factor of electricity from renewable energy sources has been taken as zero.

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, calculated

Emissions in reporting year (metric tons CO2e)
3236185

Emissions calculation methodology
Average product method

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

Please explain
The sources of indirect GHG emissions from products used by the organization are raw materials, materials, and packaging materials used in Arçelik's sold products. The amounts are calculated by choosing the most sold product as the reference model. The products which are taken into Arçelik's GHG inventory are washing machine, dishwasher, refrigerator, top table refrigerator, tumble dryer, oven, hob, hood, air conditioners, and water dispenser produced in Arçelik's production plants in Turkey, Romania, Russia, South Africa, Pakistan, And Thailand. GHG emissions caused by used materials such as plastics, metals, dyes, chemicals and other parts of the products are calculated by using the weight, sold product number, and emission factors of used materials. Material data (material types and weights) are collected from product BoM lists, R&D, and other related departments. Emissions factors are mainly taken from Ecoinvent Database and DEFRA Greenhouse Gas Reporting: Conversion Factors 2021 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Capital goods

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons 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
The capital goods are not relevant for Arçelik. Because our owned capital goods' emissions are estimated to be at a negligible quantity of our total emissions in 2021.

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

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons 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
All Scope 1 and Scope 2 emissions of our activities are calculated. There are no emissions out of Scope 1 and Scope 2 such as heat, steam, etc.

Upstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons 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
GHG emissions from upstream transportation and distribution have not been calculated yet.

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
4689

Emissions calculation methodology
Waste-type-specific method

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

Please explain
Greenhouse gas emissions emitted during recycling or disposal of wastes generated in the production have been calculated by multiplying waste amounts and emissions factors of waste recycling or disposal processes by type. Waste amount data is collected from production areas. Emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2021 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
13565

Emissions calculation methodology
Fuel-based method
Distance-based method

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

Please explain
Indirect GHG emissions from business travel include GHG emissions from international and domestic travel by road, railway, and airways. 100% of business travels in Arçelik in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations are included in the emission calculation. Distances are calculated by Google Maps Tool, and emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2021 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
71371

Emissions calculation methodology
Distance-based method

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

Please explain
Indirect GHG emissions from employee commuting include GHG emissions from domestic transportation of employees from home to factories and back. 100% of the employee commuting in Arçelik in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations are included in the emission calculation. Distances, routes, and employee numbers are taken from Administration Department (due to contract with service contractor), and emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2021 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons 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 have no leased assets for storing supplied materials from suppliers.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
203484

Emissions calculation methodology
Fuel-based method
Distance-based method

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

Please explain
The sources of greenhouse gas emissions from downstream transportation and distribution are road, off-road, air, railways, and water-borne navigation activities. The GHG emissions emitted by our domestic, import, and export product transportation activities have been calculated in accordance with ISO 14064-1 and verified by an independent body in accordance with ISO 14064-3 in 2021. The calculation methodology is “EPA Center for Corporate Climate Leadership: GHG Emission Factors for Greenhouse Gas Inventories”. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons 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 produce and sell the final products. Due to that reason, the processing of sold products is not relevant.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
22855049

Emissions calculation methodology
Average data method
Site-specific method
Methodology for direct use phase emissions, please specify (GHG emissions are calculated by using energy usages, refrigerant types and capacities of related products, sales units, and electricity emission factors of sales countries.)

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

Please explain
Indirect GHG emissions associated with the use of products are the emissions generated during the use-phase of Arçelik’s sold products in 2021 in 10 years lifetime. Products that are taken in the scope of this GHG category are washing machine, dishwasher, refrigerator, freezer, tumble dryer, oven, hob, hood, air conditioners, Turkish coffee machine, and tea-maker that are produced in Arçelik’s in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations. In addition to these products, outsourced products such as hairdryer, iron, toaster, kettle, microwave oven, vacuum cleaner, electric kettle, water dispenser, and outsourced white goods are supplied from different countries and sold to different countries are also calculated and added to Arçelik’s GHG amount. GHG emissions generated from electricity and gas consumption of the products, and GHG emissions generated from refrigerant leakage from the product for 10 years lifetime are calculated. The energy consumption of the products is taken from energy labels. Gas capacity of refrigerators, freezers, air conditioners, and tumble dryers is used to calculate GHG emissions from refrigerant leakage. Country-specific electricity emission factors from the International Energy Agency (IEA) for 90% of countries where most of the products were sold are chosen according to the customer's countries of the sold products. For the rest, the average world electricity emission factor is used. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

End of life treatment of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
20279

Emissions calculation methodology
Waste-type-specific method

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

Please explain
GHG emissions in this category are generated by the recycling and/or disposal process of waste electrical and electronics equipment (WEEE) when 10 years lifetime period of our sold products is ended. The products which are taken into Arçelik’s GHG inventory are washing machine, dishwasher, refrigerator, top table refrigerator, tumble dryer, oven, hob, hood, air conditioners, and water dispansers produced in Arçelik’s production plants in in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand operations. GHG emissions are calculated by multiplying product weights (as WEEE) and WEEE recycling emission factors. The weights of the products are collected from product BoM lists, R&D, and other related departments. Emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2021 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Downstream leased assets

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons 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
GHG emissions from downstream leased assets have not been calculated yet. GHG emissions in this category are not significant.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons 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
Arçelik has no franchising activities.

Investments

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons 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
GHG emissions of Arçelik's new factory investments will be accounted in Arçelik's Scope 1&2 emissions. So, GHG emissions of factory investments are not relevant for Scope 3 emissions.

Other (upstream)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
18

Emissions calculation methodology
Average data method

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

Please explain
GHG emissions from biological wastewater treatment processes in wastewater treatment plants of industrial zone or municipalities have been calculated and reported in this section. Chemical oxygen demand (COD) of biological wastewaters in our production plants, biological wastewater amount, and emission factors from 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories - Volume 5: Waste- Chapter 6:WASTEWATER TREATMENT AND DISCHARGE are used to calculate the GHG emissions from there. In addition to this, GHG emissions of mobile combustion of our supplier in Arctic production plant has been added in this section. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

Other (downstream)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
9171

Emissions calculation methodology
Average data method
Average product method

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

Please explain
GHG emissions from the treatment of packaging of the sold products have been calculated and reported in this section. The amounts are calculated by choosing a reference model. The products which are taken into Arçelik's GHG inventory are washing machine, dishwasher, refrigerator, top table refrigerator, tumble dryer, oven, hob, and hood produced in Arçelik's production plants in Turkey. GHG emissions caused by the treatment of packaging materials of sold products are calculated by using the weight, sold product number and emission factors of treatment methods of packaging materials. Emissions factors are taken from DEFRA Greenhouse Gas Reporting: Conversion Factors 2021 published by UK Government. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	28	GHG emissions generated during wastewater treatment of biological wastewater generated in Arçelik's operations in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand have been calculated as 28 tons CO2e in 2021. This amount covers GHG emissions generated in wastewater treatments in production plants, industrial zones, or municipalities.

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
0.00000301

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
130397

Metric denominator
unit total revenue

Metric denominator: Unit total
43295017683

Scope 2 figure used
Location-based

% change from previous year
27

Direction of change
Decreased

Reason for change
Scope 1 and Scope 2 greenhouse gas emissions per revenue decreased by 27% in 2021 compared to the previous year. The main reason for this decrease is an increase in revenue in the post-pandemic period. In addition to that, for the reporting period between 01.01.2021 to 31.12.2021, 100% of electricity in Turkey for Arçelik HQ and production plants in Turkey, and Romania, and 21.3% of the electricity used in Russia operations has been purchased from renewable energy sources to reduce Scope 2 emissions. Arçelik increases the renewable electricity rate every year. (Market-based Scope 2 emissions are calculated and verified as zero by an independent third-party organization.)

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	69594	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	167	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	178	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	13739	IPCC Fifth Assessment Report (AR5 – 100 year)
Other, please specify (Chemicals)	335	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Turkey	46561
Romania	8569
Russian Federation	10389
South Africa	3548
Pakistan	14346
Thailand	601

C7.3

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

By facility

C7.3b

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

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Ankara Dishwasher Plant - Turkey	2190	39.97582	32.563568
Çerkezköy Tumble Dryer and Electric Motors Plant - Turkey	5686	41.306196	27.965484
Bolu Cooking Appliances Plant - Turkey	11406	40.763176	31.64291
Çerkezköy Electronics Plant - Turkey	1482	41.31463	27.97888
Eskişehir Refrigerator and Compressor Plant - Turkey	11257	39.746225	30.618559
Çayırova Washing Machine Plant - Turkey	13516	40.821279	29.361822
Sütlüce Headquarter - Turkey	1024	41.047518	28.941751
Arctic Refrigerating Appliances Plant – Gaesti, Romania	7816	44.7136	25.340552
Arctic Washing Machine Plant – Ulmi, Romania	753	44.87399	25.507652
Beko LLC Refrigerator and Washing Machine Plant – Kirzhach, Russia	10389	56.105792	38.84756
Defy Cooking Appliances, Tumble Dryer and Washing Machine Plant – Jacobs, South Africa	2892	-29.92353	30.974529
DEFY Refrigerating Appliances Plant – Ezakheni, South Africa	656	-28.639284	29.84094
Dawlance Uril Refrigerator Plant – Hyderabad, Pakistan	5216	25.073671	67.666345
Dawlance DPL 1 Washing Machine and Refrigerator Plant – Karachi, Pakistan	446	24.854034	67.2216
Dawlance DPL 2 Cooking Appliances and A/C Plant – Karachi, Pakistan	8684	24.855077	67.227685
Beko Thai Refrigerator Plant – Rayong, Thailand	601	12.818289	101.250272

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)
Turkey	0	0
Romania	0	0
Russian Federation	6936	0
South Africa	24015	0
Pakistan	11034	0
Thailand	4398	0

C7.6

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

By facility

C7.6b

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

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Ankara Dishwasher Plant	0	0
Çerkezköy Tumble Dryer and Electric Motors Plant	0	0
Bolu Cooking Appliances Plant	0	0
Çerkezköy Electronics Plant	0	0
Eskişehir Refrigerator and Compressor Plant	0	0
Çayırova Washing Machine Plant	0	0
Sütlüce Headquarter	0	0
Arctic Refrigerating Appliances Plant – Gaesti, Romania	0	0
Arctic Washing Machine Plant – Ulmi, Romania	0	0
Beko LLC Refrigerator and Washing Machine Plant – Kirzhach, Russia	6936	0
Defy Cooking Appliances, Tumble Dryer and Washing Machine Plant – Jacobs, South Africa	11670	0
DEFY Refrigerating Appliances Plant – Ezakheni, South Africa	12345	0
Dawlance Uril Refrigerator Plant – Hyderabad, Pakistan	5585	0
Dawlance DPL 1 Washing Machine and Refrigerator Plant – Karachi, Pakistan	2450	0
Dawlance DPL 2 Cooking Appliances and A/C Plant – Karachi, Pakistan	2999	0
Beko Thai Refrigerator Plant – Rayong, Thailand	4398	0

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	0	No change	0	While total renewable electricity was 227,088 MWh in 2020, it realized with a 10.3% increase to 250,468 MWh in 2021. However, since the total consumed electricity increased in 2021 due to an increase in production quantities in the post-pandemic period, the share of renewable electricity remained almost the same. Since GHG emissions from renewable sources have been calculated as zero, there is no change in 2021 when compared to the previous year.
Other emissions reduction activities	9746	Decreased	8.5	Thanks to energy efficiency projects (reported in C4.3b) realized in 2021, 9,746 tons of CO2e have been prevented. Our total scope 1+2 emissions in 2020 were 114,644 tons of CO2e. Therefore, we arrived at an 8.5% emission reduction through: (-9,746/114,644)*100 = -8.5% (reduction)
Divestment	0	No change	0	There is no GHG emission change from divestment.
Acquisitions	0	No change	0	There is no GHG emission change from acquisitions.
Mergers	0	No change	0	There is no GHG emission change from mergers.
Change in output	25499	Increased	22	Our total scope 1+2 emissions have increased 15,753 tons of CO2e in 2021 when compared to 2020 (13% increased) due to an increase in production quantities during normalization in the post-pandemic period. If there is no energy efficiency project realized in 2021 in our production plants, our total scope 1+2 emissions would have been increased as 25,499 tons of CO2e (22% increase). Scope 1+2 emissions in 2020 = 114,644 ton CO2e (25,499/114,644)*100 = 22% (increase) Thanks to our energy efficiency projects realized in 2021, total Scope 1+2 emissions have increased by 13% instead of 22%.
Change in methodology	0	No change	0	There is no change in GHG calculation methodology.
Change in boundary	0	No change	0	There is no change in GHG reporting boundaries.
Change in physical operating conditions	0	No change	0	There is no change in physical operating conditions.
Unidentified	0	No change	0	There is no change due to unidentified conditions.
Other	0	No change	0	There is no change due to other conditions.

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	No
Generation of electricity, heat, steam, or cooling	Yes

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)	HHV (higher heating value)	169.4	335088.3	335257.8
Consumption of purchased or acquired electricity	<Not Applicable>	249581.4	85023.3	334604.7
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>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	887	<Not Applicable>	887
Total energy consumption	<Not Applicable>	250637.9	420111.6	670749.5

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	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Sustainable biomass

Heating value
HHV

Total fuel MWh consumed by the organization
169.4

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
169.4

MWh fuel consumed for self-generation of steam
0

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

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Breakdown of the "Sustainable Biomass" that Arçelik consumed during the reporting year is given below. All the fuels are calculated based on their Higher Heating Value (HHV). Bioethanol: 145.6 MWh and consumed only for self-generation of heat. Biodiesel: 23.9 MWh and consumed only for self-generation of heat. Data coverage: Arçelik Turkey, Arctic Romania, Beko LLC Russia, Defy South Africa, Beko Thailand, Dawlance Pakistan operations.

Other biomass

Heating value
HHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

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

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
"Other Biomass" is not consumed. Data coverage: Arçelik Turkey, Arctic Romania, Beko LLC Russia, Defy South Africa, Beko Thailand, Dawlance Pakistan operations.

Other renewable fuels (e.g. renewable hydrogen)

Heating value
HHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

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

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
"Other Renewable Fuels" are not consumed. Data coverage: Arçelik Turkey, Arctic Romania, Beko LLC Russia, Defy South Africa, Beko Thailand, Dawlance Pakistan operations.

Coal

Heating value
HHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

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

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
"Coal" is not consumed. Data coverage: Arçelik Turkey, Arctic Romania, Beko LLC Russia, Defy South Africa, Beko Thailand, Dawlance Pakistan operations.

Oil

Heating value
HHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

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

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
"Oil" is not consumed. Data coverage: Arçelik Turkey, Arctic Romania, Beko LLC Russia, Defy South Africa, Beko Thailand, Dawlance Pakistan operations.

Gas

Heating value
HHV

Total fuel MWh consumed by the organization
285199.1

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
209449.4

MWh fuel consumed for self-generation of steam
53522.9

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

MWh fuel consumed for self- cogeneration or self-trigeneration
22226.8

Comment
"Gas" or a.k.a. "Natural Gas" is consumed for self-generation of heat and also self-cogeneration. Data coverage: Arçelik Turkey, Arctic Romania, Beko LLC Russia, Defy South Africa, Beko Thailand, Dawlance Pakistan operations.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
HHV

Total fuel MWh consumed by the organization
49889.3

MWh fuel consumed for self-generation of electricity
4641.7

MWh fuel consumed for self-generation of heat
40810.2

MWh fuel consumed for self-generation of steam
0

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

MWh fuel consumed for self- cogeneration or self-trigeneration
4437.3

Comment
Data coverage: Arçelik Turkey, Arctic Romania, Beko LLC Russia, Defy South Africa, Beko Thailand, Dawlance Pakistan operations. Breakdown of tther non-renewable fuels that Arçelik consumed during the reporting year is given below. All the fuels are calculated based on their Higher Heating Value (HHV). Acetylene: Total of 959.7 MWh and consumed 100% for self-generation of heat. Diesel: Total of 20,855.7 MWh and consumed 22.3% for-self generation of electricity, 77.7% for self-generation of heat. Fuel-Oil No.4: Total of 4,176.4 MWh and consumed 100% for self-generation of co-generation. LPG: Total of 11,332.0 MWh and consumed 100% for self-generation of heat. Methane: Total of 4.6 MWh and consumed 100% for self-generation of heat. Butane: Total of 5.2 MWh and consumed 100% for self-generation of heat. Motor Gasoline: Total of 11,196.4 MWh and consumed 100% for self-generation of heat. Propane: Total of 1,098.3 MWh and consumed 100% of self generation of heat. Industrial Base Oil: Total of 260.9 MWh and consuemd 100% for self-cogeneration.

Total fuel

Heating value
HHV

Total fuel MWh consumed by the organization
335257.8

MWh fuel consumed for self-generation of electricity
4641.7

MWh fuel consumed for self-generation of heat
250429

MWh fuel consumed for self-generation of steam
53522.9

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

MWh fuel consumed for self- cogeneration or self-trigeneration
26664.2

Comment
Total fuel consumption of Arçelik during the reporting period are given. Data coverage: Arçelik Turkey, Arctic Romania, Beko LLC Russia, Defy South Africa, Beko Thailand, Dawlance Pakistan operations.

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	9577.9	9577.9	887	887
Heat	67741	67741	0	0
Steam	48050.1	48050.1	0	0
Cooling	20459.4	20459.4	0	0

C8.2e

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

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Geothermal

Country/area of low-carbon energy consumption
Turkey

Tracking instrument used
Other, please specify (Turkish National Renewable Energy Guarantees of Origin System (YEK-G))

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
108128

Country/area of origin (generation) of the low-carbon energy or energy attribute
Turkey

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2019

Comment
“Renewable Energy Guarantees of Origin System (YEK-G) & Organized YEK-G Market” is designed to monitor all processes of the generated electricity from the producer to the consumer by utilizing the blockchain technology entirely through Energy Exchange Istanbul* (EXIST) or Enerji Piyasaları İşletme A.Ş. (EPİAŞ) by its Turkish name, EXIST’s own means. Turkish national YEK-G system, where participation is provided entirely on a “voluntary basis”, became operational on June 1, 2021. As Arçelik, we have provided 56% of our green electricity with EAC from a geothermal power plant with 114.9 MW installed capacity which locates in Turkey, under the guarantee of Turkish National Renewable Energy Guarantees of Origin System (YEK-G). The reason for the difference between the amount of electricity consumption in EACs and the amount of consumption of purchased or acquired electricity in C8.2a is there are 7 campuses (HQ included) in our reporting scope. Since EACs are generated on a campus basis and they are rounded up during the certificate generation process, the amount of EAC is 0.002% more than the total amount of purchased electricity. *Energy Exchange Istanbul (EXIST) or Enerji Piyasaları İşletme A.Ş. (EPİAŞ) by its Turkish name is an energy exchange company was established on March 18, 2015. EXIST, legally incorporated under the Turkish Electricity Market Law and enforced by the Energy Markets Operation License granted by the Energy Markets Regulatory Authority (EMRA) of Turkey. EXIST is responsible for managing and operating energy markets, including power and gas commodities. EXIST ensures transparent, reliable and trustworthy market conditions by providing a central counterparty service. As an energy exchange EXIST, provides market environments where Exchange members send their orders to buy or sell energy in determined delivery platforms. Its task is to carry out matching all buy or sell orders in transparent manner, according to the regulatory manner and to establish a reference price.

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Large hydropower (>25 MW)

Country/area of low-carbon energy consumption
Turkey

Tracking instrument used
Other, please specify (Turkish National Renewable Energy Guarantees of Origin System (YEK-G))

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
86739

Country/area of origin (generation) of the low-carbon energy or energy attribute
Turkey

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2019

Comment
“Renewable Energy Guarantees of Origin System (YEK-G) & Organized YEK-G Market” is designed to monitor all processes of the generated electricity from the producer to the consumer by utilizing the blockchain technology entirely through Energy Exchange Istanbul* (EXIST) or Enerji Piyasaları İşletme A.Ş. (EPİAŞ) by its Turkish name, EXIST’s own means. Turkish national YEK-G system, where participation is provided entirely on a “voluntary basis”, became operational on June 1, 2021. As Arçelik, we have provided 44% of our green electricity with EAC from hydro-electric power plant with 44.1 MW installed capacity which locates in Turkey, under the guarantee of Turkish National Renewable Energy Guarantees of Origin System (YEK-G). The reason for the difference between the amount of electricity consumption in EACs and the amount of consumption of purchased or acquired electricity in C8.2a is there are 7 campuses (HQ included) in our reporting scope. Since EACs are generated on a campus

basis and they are rounded up during the certificate generation process, the amount of EAC is 0.002% more than the total amount of purchased electricity. *Energy Exchange Istanbul (EXIST) or Enerji Piyasaları İşletme A.Ş. (EPİAŞ) by its Turkish name is an energy exchange company was established on March 18, 2015. EXIST, legally incorporated under the Turkish Electricity Market Law and enforced by the Energy Markets Operation License granted by the Energy Markets Regulatory Authority (EMRA) of Turkey. EXIST is responsible for managing and operating energy markets, including power and gas commodities. EXIST ensures transparent, reliable and trustworthy market conditions by providing a central counterparty service. As an energy exchange EXIST, provides market environments where Exchange members send their orders to buy or sell energy in determined delivery platforms. Its task is to carry out matching all buy or sell orders in transparent manner, according to the regulatory manner and to establish a reference price.

Sourcing method
Unbundled energy attribute certificates (EACs) purchase

Energy carrier
Electricity

Low-carbon technology type
Large hydropower (>25 MW)

Country/area of low-carbon energy consumption
Russian Federation

Tracking instrument used
I-REC

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
5000

Country/area of origin (generation) of the low-carbon energy or energy attribute
Russian Federation

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1952

Comment
5,000 MWh of Beko LLC Russia Plant's electricity consumption (around 21.3% of its total electricity consumption) is supplied with I-REC Certified green electricity for the reporting period. The supplied green electricity is generated from 160.0 MW installed capacity hydro-electric power plant, locates in Russian Federation. (Verkhne-Svirskaya HPP)

Sourcing method
Other, please specify (Power Purchase Agreement with a Local Supplier that has a strong renewable energy portfolio)

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Hydro, Solar, Wind, Biomass and Other Renewables)

Country/area of low-carbon energy consumption
Romania

Tracking instrument used
Other, please specify (Statement on the Provision of Renewable Electricity)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
49718

Country/area of origin (generation) of the low-carbon energy or energy attribute
Romania

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1900

Comment
We are purchasing our electricity from a local supplier, which has a huge renewable portfolio. At th end of each year, they are sharing a statement (Statement on the Provision of Renewable Electricity) to explain the electricity supplied to Arctic Romania is generated from renewable sources. With this statement, Arctic Romania's energy consumption is verified with AA1000 Assurance Standard by an independent 3rd party. Since electricity supplied from grid with different renewable sources (as Renewable Energy Mix), there is no specific commissioning year for specific power plant. Therefore commissioning year has been filled as 1900.

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
Turkey

Consumption of electricity (MWh)
202262.7

Consumption of heat, steam, and cooling (MWh)
66339

Total non-fuel energy consumption (MWh) [Auto-calculated]
268601.7

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Romania

Consumption of electricity (MWh)
50684

Consumption of heat, steam, and cooling (MWh)
3466.1

Total non-fuel energy consumption (MWh) [Auto-calculated]
54150.1

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Russian Federation

Consumption of electricity (MWh)
23495.6

Consumption of heat, steam, and cooling (MWh)
30866.3

Total non-fuel energy consumption (MWh) [Auto-calculated]
54361.9

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
South Africa

Consumption of electricity (MWh)
25750.4

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
25750.4

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Thailand

Consumption of electricity (MWh)
9451.5

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
9451.5

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Pakistan

Consumption of electricity (MWh)
32425.5

Consumption of heat, steam, and cooling (MWh)
35579.1

Total non-fuel energy consumption (MWh) [Auto-calculated]
68004.6

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

C9. Additional metrics

C9.1

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

Description
Waste

Metric value
135899

Metric numerator
tons

Metric denominator (intensity metric only)

% change from previous year
31.6

Direction of change
Increased

Please explain
In 2020, Arçelik's production quantities were lower compared to 2021 due to lockdowns caused by Covid-19 pandemics. However, production quantities have increased in 2021 since the normalization started and lockdowns ended in the post-pandemic period. Therefore, Arçelik's total waste amount including plastic and metal scraps, packaging, and hazardous waste generated in global production plants has increased by 31.6%. Waste amount in 2020 (ton): 103,263 Waste amount in 2021 (ton): 135,899 % change from the previous year: 31.6 (increased)

Description
Energy usage

Metric value
2406315

Metric numerator
GJ

Metric denominator (intensity metric only)

% change from previous year
11.6

Direction of change
Increased

Please explain
In 2020, Arçelik's production quantities were lower compared to 2021 due to lockdowns caused by Covid-19 pandemics. However, production quantities have increased in 2021 since the normalization started and lockdowns ended in the post-pandemic period. Therefore, Arçelik's total energy consumption which depends on production in global production plants has increased by 11.6%. Energy consumption in 2020 (GJ): 2,155,451 Energy consumption in 2021 (GJ): 2,406,315 % change from the previous year : 11.6 (increased)

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
Reasonable assurance

Attach the statement
Arcelik_GHG Verification Reports_2021.pdf

Page/ section reference
GHG Verification Certificates of Arçelik's production plants in Turkey, Romania, Russia, South Africa, Pakistan, and Thailand (Page: 1-22), CDP Verification Document from the third party verification organization (Page: 23-24), Renewable Energy Declarations (Page: 25-38) Please note that Scope 1 emissions have been reported under the "Direct GHG emissions and removals" section in accordance with ISO 14064-1:2018 Standard, and verified in accordance with ISO 14064-3.

Relevant standard
ISO14064-3

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 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Arcelik_GHG Verification Reports_2021.pdf

Page/ section reference
GHG Verifications of plants in Turkey,Romania,Russia,S.Africa,Pakistan,Thailand(p.1-22);CDP Verification Document(p.23-24);Renewable Energy Docs(p.25-38) 100% of electricity in Turkey and Romania;21.3% of it in Russia in 2021 was purchased from renewable sources.Market-based Scope2 emissions were reported as zero since emission factor of renewable sources is taken as zero.Scope 2 emissions were reported under"Indirect GHG emissions from imported energy"section in accordance with ISO14064-1:2018.

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

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
Reasonable assurance

Attach the statement
Arcelik_GHG Verification Reports_2021.pdf

Page/ section reference
GHG Verifications of plants in Turkey,Romania,Russia,S.Africa,Pakistan,Thailand(p.1-22);CDP Verification Document(p.23-24);Renewable Energy Docs(p.25-38) 100% of electricity in Turkey and Romania;21.3% of it in Russia in 2021 was purchased from renewable sources (Market-based Scope2 emissions were reported as zero). Location-based Scope 2 emissions were reported under"Indirect GHG emissions from imported energy"section in accordance with ISO14064-1:2018.

Relevant standard
ISO14064-3

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: Purchased goods and services
Scope 3: Waste generated in operations
Scope 3: Business travel
Scope 3: Employee commuting
Scope 3: Downstream transportation and distribution
Scope 3: Use of sold products
Scope 3: End-of-life treatment of sold products

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
Arcelik_GHG Verification Reports_2021.pdf

Page/section reference
GHG Verification Certificates of Arçelik's production plants in Turkey,Romania,Russia,South Africa,Pakistan,Thailand(Page: 1-22), CDP Verification Document from the 3rd party organization (Page: 23-24) Please note that Scope 3 emissions have been reported under the "Indirect GHG emissions and removals (categories 3,4,5,6)" sections in accordance with ISO 14064-1:2018 Standard, and verified in accordance with ISO 14064-3. Detailed explanations of Scope 3 categories can be found on pages 23-24.

Relevant standard
ISO14064-3

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
C4. Targets and performance	Change in Scope 1 emissions against a base year (not target related)	ISO 14064-3	Besides, GHG management procedures, operational instructions, “on-site” implementations, GHG emissions, uncertainty and materiality calculations, and energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2021)". In this report changes in Scope 1&2&3 emissions against the base year have been verified.
C4. Targets and performance	Change in Scope 2 emissions against a base year (not target related)	ISO 14064-3	Besides, GHG management procedures, operational instructions, “on-site” implementations, GHG emissions, uncertainty and materiality calculations, and energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2021)". In this report changes in Scope 1&2&3 emissions against the base year have been verified.
C4. Targets and performance	Change in Scope 3 emissions against a base year (not target related)	ISO 14064-3	Besides, GHG management procedures, operational instructions, “on-site” implementations, GHG emissions, uncertainty and materiality calculations, and energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2021)". In this report changes in Scope 1&2&3 emissions against the base year have been verified.
C6. Emissions data	Change in Scope 1 emissions against a base year (not target related)	ISO 14064-3	Besides, GHG management procedures, operational instructions, “on-site” implementations, GHG emissions, uncertainty and materiality calculations, and energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2021)". In this report changes in Scope 1&2&3 emissions against the base year have been verified.
C6. Emissions data	Change in Scope 2 emissions against a base year (not target related)	ISO 14064-3	Besides, GHG management procedures, operational instructions, “on-site” implementations, GHG emissions, uncertainty and materiality calculations, and energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2021)". In this report changes in Scope 1&2&3 emissions against the base year have been verified.
C6. Emissions data	Change in Scope 3 emissions against a base year (not target related)	ISO 14064-3	Besides, GHG management procedures, operational instructions, “on-site” implementations, GHG emissions, uncertainty and materiality calculations, and energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2021)". In this report changes in Scope 1&2&3 emissions against the base year have been verified.

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, but we anticipate being regulated in the next three years

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Currently, we do not have any obligations under any carbon pricing mechanism, as there are no carbon pricing mechanisms in the countries we operate in or we are not a carbon-intensive industry.On the other hand, carbon pricing mechanisms are becoming more common day by day. For example, a market-based carbon pricing mechanism will come into force in the short term in Turkey.

Policy based carbon pricing mechanisms like ETS and carbon tax are driven by governments or public authorities and there are some regulations and rules. On the other hand, internal carbon pricing is a voluntary mechanism and companies, financial institutions and even some public organizations apply it internally. It allows organisations to assess the financial impacts of their carbon emissions and drive low carbon investments, drive energy efficiency and navigate GHG regulations.

To manage this possible obligation, Arçelik has science-based targets to reduce GHG emissions, energy reduction targets and net zero target in 2050. Arçelik Sustainability Council contributes to these targets every year to increase energy efficiency in production, invest in renewable energy systems and increase the ratio of green electricity to reduce GHG emissions. With energy efficiency projects in Arçelik Global production plants in the last 12 years (2010-21), it has been saved nearly 1.4 Million GJ energy with 2,542 projects. Around 134,000 tCO2e emissions have been prevented since 2010. Arçelik, starting from 2012, has been using green electricity, the supply rate of green electricity in Arçelik Global has reached 69% as of 2021.

Furthermore, Arçelik had been using the Implicit Carbon Price Model since 2010. However, in 2020 it was switched to Shadow Price internal carbon pricing mechanism to drive various expenditure decisions that will result in a reduction of Arçelik's direct and indirect GHG emissions from its global business operations. A price of EUR 30 per ton of CO2e carbon is applied for investments higher than EUR 50,000 capital cost and 50 kW capacity to navigate the possible GHG regulations. As of 2021, it has been increased to 50 EUR per ton CO2e (523 TRY/ton CO2e). (2021 Average FX Rates 1 EUR = 10.46TRY)

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?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price
Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities
Supplier engagement

GHG Scope
Scope 1
Scope 2

Application
Arçelik had been using the Implicit Carbon Price Model* since 2010. However, in 2020 it was switched to Shadow Price internal carbon pricing mechanism to drive various expenditure decisions that will result in a reduction of Arçelik's direct and indirect GHG emissions from its global business operations. As of 2021 a price of EUR 50 per ton of CO2e** carbon is applied for investments higher than EUR 50,000 capital cost and 50 kW installed capacity. * Implicit Carbon Price in Arçelik (2010-2019): Every plant has its own budget about energy efficiency improvement projects and other emission reduction projects. Thanks to these projects, GHG emissions can be reduced while efficiency improvement projects are implemented. At the end of the year, total investment of energy projects was divided by total CO2 reduction to calculate the implicit carbon price. ** 2021 Average FX Rates 1 EUR = 10.46 TRY 50 EUR = 523 TRY

Actual price(s) used (Currency /metric ton)
523

Variance of price(s) used
Arçelik uses a voluntary pricing method for carbon pricing. The price of carbon will be reviewed and updated according to current carbon prices around the world annually with benchmarking and external resources such as EU ETS.

Type of internal carbon price
Shadow price

Impact & implication
As of 2020, Arçelik has implemented the Internal Shadow Carbon Price mechanism to drive various expenditure decisions that would result in a reduction of Arçelik's direct and indirect emission from our global business operations. EUR 30 per ton CO2e carbon price is applied in the feasibility stage of the investments which are higher than EUR 50,000 capital cost and 50 kW installed capacity. Thanks to shadow carbon price mechanism, Arçelik is getting ready for possible upcoming carbon regulations, decreasing its own energy consumption and GHG emissions during the investments' expected life time with the choice of more energy efficient, it helps to change the internal behavior while increasing the energy efficiency. Thanks to risks and opportunities analyses of Trucost ESG Analyse, stress test has been conducted as low, moderate and high carbon price scenarios, based on 2030 and 2050 projections. Arçelik's internal carbon price approach can be found as publicly available in Sustainability Report 2021 page 48. In Page 181, stress test of Trucost ESG Analyse can be found, as low, moderate and high carbon price scenarios. In conducting the policy-related risks and the price of carbon, Trucost ESG Analysis services have been utilized, including the Corporate Carbon Pricing Tool, which analyzes the carbon price risks premium based on High, Medium and Low carbon price scenarios based on the responsiveness level of each scenario to limit the warming to 2 degrees Celcius. The scenario analyses are based on 2030 and 2050 projections. As of 2021, we have increased the carbon shadow price from 30 EUR to 50 EUR (523 TRY) per tCO2e according to trend in EU ETS. (Sustainability Report 2021 : https://www.arcelikglobal.com/media/6938/arcelik21_sustainability_report.pdf)

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers/clients
Yes, other partners in the value chain

C12.1a

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

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect climate change and carbon information at least annually from suppliers

% of suppliers by number
18

% total procurement spend (direct and indirect)
78

% of supplier-related Scope 3 emissions as reported in C6.5
100

Rationale for the coverage of your engagement
Arçelik has an extensive supplier network,the awareness level in terms of approaching sustainability as a business model is not the same throughout this extensive network.Our explicit statement is to not work with suppliers that do not establish those systems in their production facilities until the specified deadlines have been

communicated to our suppliers. The strategy here is to transform our suppliers together with Arcelik and to share best practices. By 2023:We will not work with suppliers(*) that do not have ISO 14001 certification. By 2025:We will not work with our suppliers* that do not have ISO 50001 certification which consumes energy over 1000 ToE. As the next step to this initial strategy, we started to collect environmental data from suppliers such as GHG emissions, energy consumption,&get them to set water, waste, energy, GHG emission reduction targets. We have also publicly declared that we will enable our suppliers to set these targets publicly available as of the end of 2023. As of 2025,we have committed to collect environmental data such as Scope 1&2 GHG emissions for approx. 400 of our suppliers,corresponding to 90% of our purchasing volume (*).Quantitative environmental data collection part including GHG emissions (scope 1&2 of supplier) is important to emphasize our rationale behind this effort.We conduct this process, Supplier Sust. Data Monitoring in collaboration with a third-party firm. This assessment is made to critical suppliers which are amongst the 90% of purchasing volume significant impact on company operations in terms of high purchasing volume, critical components provided or being nonsubstitutable.We require all newly commissioned suppliers to conduct self-evaluation audits on environment, quality,ethics.We have approx. 2,000(direct) suppliers in more than 60 countries.In 2021,we have 364 critical Tier 1 suppliers (represents 78% of purchasing volume).In 2021,a total of 215 critical suppliers have been audited, we collected environmental data from 151 suppliers. . In 2021,long-term environmental target commitment was received from 183 suppliers to set GHG emission/water/waste/energy efficiency targets.Ratio of supplier-related Scope 3 emissions reported in C6.5 is 100% (upstream and downstream activities such as purchased materials, packaging, employee commuting, and product logistic activities all are included).

Impact of engagement, including measures of success

Assessment comprises ESG questions including EMS,compliance with legislation,monitoring (e.g. scope 1&2 GHG emissions),other env.sust. activities.Each question has a point and weight. The sustainability risk levels of the suppliers are determined as high, medium, acceptable,good,and excellent.The third-party firm provides us the supplier data monitoring software platform,works in close collaboration with the suppliers,act as an advisor for the suppliers.The aim is to understand our suppliers' ESG-related risks and opportunities by collecting and analyzing their data. Our main intention is to enable Scope 3 reduction in the value chain. In 2021, we collected environmental data from 151 suppliers,reaching 38% of our target.Based on the results,if a Supplier scores 24 or less,it means that the supplier is classified as a "high risk" supplier.We take action according to the type of risk detected,Third-party audit findings also help identify high-risk suppliers.If the supplier fails to reach the "Acceptable level" within the maximum of 12 months of the plans' launch,Arçelik reserves the right to cancel the contract.Action plan is approved by the partner.If the actions taken suitable, the supplier score is revised by the partner.In 2021,the number of suppliers classified as high-risk is 24,its percentage of total suppliers in that category is 1.19% (24/2019). One of the findings of high-risk suppliers is the lack of environmental data measurements such as GHG. We want to transform together with our supply chain and minimize the impact of the operations in the value chain in total.In 2021, we circulated a Commitment Letter to our suppliers explaining our sustainability strategy, our sustainability credentials and our Science Based Targets as well as the 2030 environmental targets.We have asked our suppliers to sign the Commitment Letter,and to commit to setting their own targets for GHG.In addition,suppliers will share these targets publicly on their websites,in their sustainability reports. In 2021, we circulated a Commitment Letter to our suppliers explaining our sustainability strategy& 2030 targets, our Science Based Targets.We have asked our suppliers to sign the Commitment Letter, to commit to setting their own targets for GHG.To date, 183 suppliers have signed the Commitment Letter.In 2021, 77 % of all critical suppliers have ISO 14001 certificate.

Comment

As Arçelik, we adopt our sustainability approach in the direct focus of our strategy and business model, and all our activities are carried out within this frame. Additionally, corporate sustainability covers not only managing governs the economic, social, and environmental impacts of our company, but also includes the monitoring and developing of sustainability performances of our suppliers. https://www.arcelikglobal.com/en/sustainability/intouch/areas/sustainable-supply-chain/ https://www.arcelikglobal.com/media/6938/arcelik21_sustainability_report.pdf https://www.arcelikglobal.com/en/company/supply-chain/supplier-sustainability-index/ https://www.arcelikglobal.com/media/5553/responsible-purchasing-policy_en.pdf

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Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change
Provide training, support, and best practices on how to make credible renewable energy usage claims

% of suppliers by number

18

% total procurement spend (direct and indirect)

78

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

100

Rationale for the coverage of your engagement

An important part of our approach consists of working with suppliers to ensure continuous improvement. In 2021, Arçelik started to provide consultancy services to its suppliers on sustainability issues through a third-party independent institution reaching 1,900 person*hours. In addition, we began a program that provides sustainability training to our suppliers through non-governmental organizations and direct webinars. The program includes a wide range of topics such as supplier sustainability practices and strategies,energy efficiency and renewable energy applications, greenhouse gas inventory calculation method, conflict minerals, energy and environmental data (GHG,water,waste) collection, environmental management system and risk identification. To increase our reach and participation rate, we initiated the Digital Education Platform project in 2021 with the aim of digitizing our training programs. By 2022, our suppliers will be able to easily access the training through this platform. Based on Arçelik Global Responsible Purchasing Policy and the Global Code of Conduct, Arçelik expects its suppliers to establish environmental management systems, improve it continuously and to protect the environment in accordance with the relevant national and international legal legislations and regulations in order to enhance their environmental performance in line with the principles of sustainable development and circular economy. We audit our suppliers according to these requirements, and by evaluating their results, actions and training subjects are specified.

Impact of engagement, including measures of success

As per our Global Responsible Purchasing Policy, we audit our suppliers in terms of compliance with the Code of Conduct. In 2021, we collected environmental data from 151 suppliers,reaching 38% of our target. Based on the survey results and third-party audits, 24 suppliers have been rated as high risk supplier. A total of 1,249 areas open to improvement were identified. In addition, the findings of the previous period were taken into consideration. As a result of our audits findings, 19 follow-up audits were carried out by third party auditors and a total of 41% of the nonconformities were improved. No actual cases of child labor, forced labor,discrimination, bribery, or corruption were detected during these audits. There were no terminations of contacts in 2021. Suppliers were trained 1,900 person*hours.

Comment

https://www.arcelikglobal.com/media/6938/arcelik21_sustainability_report.pdf

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C12.1b

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

Type of engagement & Details of engagement

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

% of customers by number

100

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

100

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

We engage and raise our customers' awareness with advertisements, documentaries, and publications related to the energy consumption of products, energy efficiency, and by producing the best energy-efficient products. All of our customers are covered in this engagement. For customer awareness, our product's user manuals include information part on "Things to do to save energy". On our website, and on the product labels, customers can reach the energy consumption information of our products. 100% of Scope 3 emissions that come from the use of sold products during their lifetime were reported in C6.5. Arçelik aims to use sustainable product innovation as leverage to differentiate itself from the competition, reduce its environmental footprint to reach its targets, and create brand awareness, which would enhance brand perception and help increase sales and revenues. As a home appliance manufacturer, Arçelik has the means to create change for good and contribute to the fight against global risks such as climate crisis and plastic pollution with energy and resource-efficient appliance sales. By putting sustainability at the heart of operations, Arçelik aims to increase the premium brand perception and to increase its brand pricing index and considers it is a company's mission to increase consumer awareness on climate change and the world's other critical issues such as the plastic crisis limiting a prosperous life within planetary boundaries. Arçelik aims to increase revenue from the sale of energy and resource-efficient appliances as well as from connected appliances.

Impact of engagement, including measures of success

Keeping up with such promises results in a significant cost impact on company financials. Arçelik needs to invest in producing energy-efficient appliances, increasing renewable energy, energy efficiency investments, and green electricity procurement % to keep its GHG reduction targets. This results in high cost up per product and high investments which cannot always be reflected in price increases. We try to raise awareness of our customers on energy efficiency. Our measure of success is to increase the demand of customers for our most energy-efficient appliances and increase the rate of revenue from the most efficient home appliance sales.

C12.1d

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

Arçelik has a close relationship with all relevant ministry departments with joining and leading their climate change projects. E.g. Arçelik was a partner to Market Transformation of Energy Efficient Appliances (EVÜdP) in Turkey. EVÜdP Project started in 2010 and completed by the end of 2015. UNDP, GEF, T.R. Ministry of Industry and Technology, T.R.Ministry of Energy and Natural Resources, and TÜRKBESD are also members of the Project. The aim was to enhance the strategy and infrastructure of market transformation towards more energy-efficient household appliances thus reducing domestic electricity consumption and decreasing greenhouse gas emissions. As a result of EVÜdP project, EU ecodesign and energy labeling regulations for washing machine, dishwasher, oven, hob, hood, refrigerator, freezer, air conditioners, dryer, and television were implemented in Turkey in 2011 in parallel with EU laws. Under the EU harmonization efforts, non-energy efficient refrigerators, washing machines, and dishwashers are banned in 2011. In this way products are placed on the market as of today are 2 times more efficient compared to 2010. For implementing EU regulations to Turkish legislation; strong coordination between T.R. Industry and Technology Ministry, and the producers has been created.

Arçelik also supports national and international activities for combating climate change. Arçelik participates in Global Climate Conferences (COP) and shares its best practices in the panels since 2011. Arçelik attends meetings organized by the Ministry for defining Turkey's climate strategy.

One of the Board Members of Arçelik chairs the Turkish Industry & Business Association Investment Environment Roundtable as well as Industry Policies Roundtable. The Quality, Sustainability and Corporate Affairs Director of Arçelik, chairs the Turkish Industry & Business Association Environment and Climate Change Working Group and regularly reports all climate change-related issues including but not limited to the EU Green Deal, Carbon Border Adjustment Mechanism, carbon pricing, carbon credits market, and renewable energy investment.

In addition to these, Arçelik is a member of several international trade associations and NGOs and an active participant in climate-related working groups and projects under these organizations. For example, Arçelik is a member of WBCSD, the Turkish Sustainable Development Association (SKD) which is a direct member of WBCSD, and Sustainable Process Industry Through Resource and Energy Efficiency (A.SPIRE). Also, Arçelik is in collaboration with UNEP for U4E project.

As an active member of the association, Arçelik closely follows the new EU energy labelling and eco-design legislation through APPLiA that engages with policymakers for the related low carbon economy transition of home appliances, shares comments, opinions with other participants, and takes necessary internal actions to align its products with the 1.5-degree world. In 2022, the CEO of Arçelik has been selected as the President of APPLiA.

Arçelik also incorporates climate-related risk and opportunity disclosures in this report in line with the Taskforce on Climate-related Financial Disclosures (TCFD) framework. Being one of the supporters of the Taskforce on Climate-related Financial Disclosures(TCFD), our targets to reduce GHG emissions were approved by the Science Based Targets initiative (SBTi).

We collaborate with International Finance Corporation(IFC) to evaluate the water efficiency of our production plants. In the project, the efficiency of water consumption in each process is evaluated and benchmarked against global players in the industry In line with the project, we set our 2030 target to reduce water withdrawal in the production process by 45% per product compared to the 2015 base year. This target is very critical for Arçelik since water stress is detected as the most important climate-related risk for Arçelik.

We are involved in an H2020 project called CSERVEES which aims to accelerate the transition to a circular economy in the electronics sector. With this project, Arçelik focuses on increasing recycled content in production and try new circular economy business models such as rent and second-hand sale. Arçelik is also a partner of another H2020 project called ECOFACT based on enhanced Life Cycle Assessment (LCA) and Life Cycle Cost Analysis (LCCA) towards resource-efficient manufacturing. The project aims to support manufacturing industries in optimizing energy performance of production processes with regard to restrictions such as time and resources.

In addition, Arçelik's CEO is a commissionaire of the High-Level Commission on Carbon Pricing and Competitiveness. Arçelik is the only Turkish company in this commission. Arçelik follows the decisions about carbon pricing management for both the company itself and Turkey. Arçelik sets carbon management strategies and targets including internal carbon pricing for its all production plants.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Climate-related disclosure through a non-public platform

Description of this climate related requirement

Our suppliers have to meet our Policy referred in their contracts.Accepting&complying with Our Responsible Purchasing Policy is a contractual obligation.In case of a serious violation of this Policy,we reserve the right to terminate the contract with our suppliers.Likewise,we expect our suppliers to have and implement this policy covering its own suppliers.https://www.arcelikglobal.com/media/5553/responsible-purchasing-policy_en.pdf. We conduct supplier sustain.ty risk assessment in collaboration with a third-party firm.This firm provides us with the supplier data monitoring software platform,acts as an advisor for the suppliers.The aim is to understand our suppliers' ESG-related risks.Our main intention is to enable Scope 3 reduction in the value chain.This assessment is made to critical suppliers which are amongst the 90% of purchasing volume significant impact on company operations in terms of high purchasing volume, critical components provided or being nonsubstitutable.We have approx. 2,000 (direct) suppliers in more than 60 countries.We have 364 critical Tier 1 suppliers(represents 78% of purchasing volume).As of 2025,we have committed to collect env.data such as Scope1&2 GHG emissions for approx.400 of our suppliers, corresponding to 90% of our purchasing volume.In 2021,total of 215 critical suppliers have been audited,we collected environmental data from 151 suppliers.In 2021,long-term env. target commitment was received from 183 suppliers to set GHG emission target.

% suppliers by procurement spend that have to comply with this climate-related requirement

90

% suppliers by procurement spend in compliance with this climate-related requirement

78

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment
Off-site third-party verification
On-site third-party verification
Supplier scorecard or rating

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers
Yes, we engage indirectly through trade associations
Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

2030: Approved Science Based Targets in line with a well below 2-degree scenario to decrease absolute global Scope 1&2 emissions by 30% and Scope 3 use phase emissions by 5% as of 2030 from the 2018 baseline. Revised targets aligned with 1,5 degree aiming for 50.4% absolute reduction against Scope 1&2 and Scope 3 use phase emissions as of 2030 compared to 2018. Doubling energy productivity per revenue as of 2030. Decreasing energy consumption in production per product by 45% as of 2030. Installing 50MW renewable energy solar panel systems in production. Procuring 100% green electricity in manufacturing. Reaching 450MW Arçelik branded PV panel sales. 2050: Net Zero 2050 Commitment aligned with SBTi Net Zero Standard along the value chain across all three scopes including all items in Scope 3. Please see pages 19-20,43-45,181,184 of the 2021 Sustainability Report and the website with the 2050 roadmap: https://www.arcelikglobal.com/en/sustainability/intouch-with-our-planet/combating-the-climatecrisis/
arcelik21_sustainability_report.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

The Board Member of Arçelik chairs the Turkish Industry&Business Association Investment Environment and Industry Policies Roundtables. The Quality, Sustainability and Corporate Affairs (QSCA) Director of Arçelik, chairs the Turkish Industry & Business Association Environment and Climate Change Working Group and regularly reports all climate change-related issues including but not limited to the EU Green Deal, Carbon Border Adjustment Mechanism, carbon pricing, carbon credits market, and renewable energy investment. Arçelik's CEO is a high commissioner on the Carbon Pricing Leadership Coalition under the auspices of the World Bank. In 2022, Arçelik's CEO was selected as the president of APPLiA (Home Appliance Association in EU) which engages with policymakers about the related issues in the home appliance industry including the impacts of the industry on climate change and impacts of climate change on the industry. In line with the SBT Net Zero 2050 Standard, Arçelik intends to invest in permanent carbon removal solutions to offset the company's residual emissions (blue carbon or a combination of both technology-based solutions & blue carbon projects). In 2021, Arçelik joined Business Ambition for 1.5°C and Race to Zero -Net-zero commitment. Arçelik committed to double energy productivity per revenue by 2030 based on the EP100 membership. Arçelik participated in COPs and represented Turkey. CEO of Arçelik attended the "Dialogue for Climate Action" event in Vienna,which was launched by WB, within the frame of COP21 goals. Arçelik signed The Principles for Dialogue on Climate Action. Arçelik made commitments to «Paris Pledge for Action» of Cambridge University and the “Responsible corporate engagement policy” of the “Road to Paris 2015 Project”. Arçelik shares its comments, opinions, experiences, and revisions for draft environmental legislation including climate-related regulations in the geographies it operates, and joins regulation-making meetings with other pairs.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate

Circular economy
Emissions trading schemes
Extended Producer Responsibility (EPR)
Green electricity tariffs

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Arçelik was a partner to Market Transformation of Energy Efficient Appliances (EVÜdP) in Turkey. EVÜdP Project started in 2010 and completed by the end of 2015. UNDP, GEF, T.R. Ministry of Science,Industry and Technology and T.R.Ministry of Energy and Natural Resources Directorate General of Renewable Energy and TÜRKBESD are also members of the Project. The aim was to enhance the strategy and infrastructure of market transformation towards more energy-efficient household appliances thus reducing domestic electricity consumption and decreasing greenhouse gas emissions. We participate and give comments at the preliminary legislative phase of EU regulations on energy efficiency, energy labelling and circular economy package through the membership in APPLiA (European Domestic Equipment Manufacturers’ Association).We have a close relationship with relevant ministries in Turkey and works together on the transposition of EU regulations into Turkish law. We made a joint study with Ministry of Energy and Natural Resources to calculate regional diffraction of emission factor to reduce risk of reflection of such uncertainty to GHG emissions.Arçelik participated in COPs and represented Turkey.We made a joint study with the Ministry of Environment and Urbanization to publish the “WEEE Regulation” in Turkey.We provided our comments to Ministry for Turkish MRV Regulation on the importance of specifying Turkish grid emission factor and specifying the tiers.

Policy, law, or regulation geographic coverage

Global

Country/region the policy, law, or regulation applies to

<Not Applicable>

Your organization’s position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

Arçelik was a partner to Market Transformation of Energy Efficient Appliances (EVÜdP) in Turkey. EVÜdP Project started in 2010 and completed by the end of 2015. UNDP, GEF, T.R. Ministry of Science,Industry and Technology and T.R.Ministry of Energy and Natural Resources Directorate General of Renewable Energy and TÜRKBESD are also members of the Project. The aim was to enhance the strategy and infrastructure of market transformation towards more energy efficient household appliances thus reducing domestic electricity consumption and decreasing greenhouse gas emissions.We participate and give comment at the preliminary legislative phase of EU regulations on energy efficiency, energy labelling and circular economy package through the membership in APPLiA (European Domestic Equipment Manufacturers’ Association).We have a close relationship with relevant ministries in Turkey and works together on the transposition of EU regulations into Turkish law. We made a joint study with Ministry of Energy and Natural Resources to calculate regional diffraction of emission factor to reduce risk of reflection of such uncertainty to GHG emissions.Arçelik participated in COPs and represented Turkey.We made a joint study with the Ministry of Environment and Urbanization to publish the “WEEE Regulation” in Turkey.We provided our comments to Ministry for Turkish MRV Regulation on the importance of specifying Turkish grid emission factor and specifying the tiers.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
<Not Applicable>

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate
Carbon tax
Emissions trading schemes

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Partnership of Market Readiness (PMR) Turkey Project Phase - PMR Turkey has been pioneering activities on implementation of legislation on monitoring, reporting and verification, and conducting studies on applicability of carbon pricing instruments in our country since 2013.

Policy, law, or regulation geographic coverage
National

Country/region the policy, law, or regulation applies to
Turkey

Your organization's position on the policy, law, or regulation
Support with no exceptions

Description of engagement with policy makers
PMR Turkey has been pioneering activities on the implementation of legislation on monitoring, reporting and verification, and conducting studies on the applicability of carbon pricing instruments in our country since 2013. Under the Partnership of Market Readiness (PMR) Turkey Project Phase I, analytical studies were carried out to support decision-making processes. Some of the analytical studies carried out in the 1st Phase of the Project are as follows; • Monitoring, Reporting, Pilot Studies on Verification (IRD) System • Evaluation of Compliance of Greenhouse Gas Emission Trading System in Turkey • Evaluation of Market-Based Emission Reduction Policy Options in Turkey • Evaluation of the Effects of Carbon Pricing Policies on the Economy, Budget and Sectors • Assessment of Carbon Leakage Risk for Turkey Under Carbon Pricing Policies • Synthesis Report- Carbon Pricing Policy Recommendations for Turkey In the 2nd Implementation Phase, the legal and technical infrastructure for pilot ETS was established. The main outcomes Phase 2 are listed below: • Establishing the legal and institutional infrastructure on the Climate Change Law and ETS regulations • Establishing an upper limit for the emissions and forming allocation plans for Pilot ETS • Developing an application for ETS simulation • Developing infrastructure of a registry software program for ETS • Evaluation of the Paris Agreement- Article 6 with regards to Turkey's Aspect • Forming A Communication Strategy for PMR During the project, several number of stakeholder meetings and feedback rounds were conducted that helped to understand the attitudes, motivations and values of key target audiences. As a stakeholder of this project, we participated in all meetings and provided all the necessary support in shaping the legislation infrastructure and the systems.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
<Not Applicable>

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate
Mandatory climate-related reporting

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Regulation on Monitoring, Reporting, Verification (MRV) of GHG Emissions

Policy, law, or regulation geographic coverage
National

Country/region the policy, law, or regulation applies to
Turkey

Your organization's position on the policy, law, or regulation
Support with no exceptions

Description of engagement with policy makers
We provided our comments to the Ministry of Environment, Urban Planning and Climate Change for Turkish MRV Regulation on the importance of specifying Turkish grid emission factor and specifying the tiers.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
<Not Applicable>

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate
Circular economy

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Regulation on Waste Electrical and Electronic Equipments,

Policy, law, or regulation geographic coverage
Regional

Country/region the policy, law, or regulation applies to
South Africa
Turkey
Europe

Your organization's position on the policy, law, or regulation
Support with no exceptions

Description of engagement with policy makers
We participate and give comment at the preliminary legislative phase of WEEE through the membership in APPLiA (European Domestic Equipment Manufacturers'

Association), Digitaleurope, TÜRKBESD (Turkish White Goods Manufacturers Association), ERA (E-waste Recycling Authority), SADA (South African Domestic Appliances Association).

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
<Not Applicable>

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association
Other, please specify (Turkish Industries & Business Association (TUSIAD))

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We have already influenced them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
One of the Board Members of Arçelik chairs the Turkish Industry & Business Association (TUSIAD) Investment Environment and Industry Policies Roundtables. The Quality, Sustainability and Corporate Affairs (QSCA) Director of Arçelik, chairs the Turkish Industry & Business Association Environment and Climate Change Working Group and regularly reports all climate change-related issues including but not limited to the EU Green Deal, Carbon Border Adjustment Mechanism, carbon pricing, carbon credits market and renewable energy investment. The Working Group evaluates the effective implementation of the regulations, conducts research, and presents suggestions to relevant institutions and organizations in this framework. The Working Group contributes to the work of the Climate Change and Air Management Coordination Board, of which TUSIAD is a member, and to the COPs. The group also contributes to the work of the Turkish Climate Platform established by REC Turkey and TÜSİAD in order to raise awareness in the business world in the field of climate change in Turkey.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)
267456

Describe the aim of your organization's funding
Annual membership fee

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (The Union of Chambers and Commodity Exchanges of Türkiye (TOBB))

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We are attempting to influence them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
There is a sub-working group under the association named Consumer Durable Goods Council Environmental Sub-Working Group. This working group is established for supporting durable goods sector to develop sectoral knowledge on environmental issues and the development of regulations in order to provide sectoral economic growth in parallel with the sustainability of natural resources. The sub-working group evaluates the effective implementation of the environmental regulations and presents suggestions to relevant institutions and organizations in this framework. Arçelik's Environment Manager is a member of this sub-working group. In addition to that, we are an active participant in the Green Deal Working Group of the Chamber where critical priorities are assessed in terms of Turkey's green deal transition road map, and conveyed positions to influence accordingly the policy makers.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)
60338

Describe the aim of your organization's funding
The amount indicated above reflects the membership fee for the related regional chambers (for example; İstanbul Chamber of Industry (in Turkey), İstanbul Chamber of Trade (in Turkey), etc.).

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (United Kingdom, Association of Manufacturers of Domestic Appliance (AMDEA))

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We are attempting to influence them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
Since 2018, we are a member of AMDEA, which, has been chaired by the Country Manager of Beko Plc, our UK subsidiary. AMDEA is the sister organization of the EU organization called APPLiA. Through this organization, we follow laws and regulations in the UK, contribute to the formation of association views about these regulations and closely follow legislation regarding the circular economy.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)
1270603

Describe the aim of your organization's funding
Annual membership fee

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (Home Appliance Europe (APPLiA))

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We are attempting to influence them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
In terms of climate change, APPLiA engages with policymakers for the related low carbon economy transition of home appliances. Climate-related regulations, which are discussed in working groups in APPLiA, including energy and material efficiency, Extended Producer Responsibility (EPR), and transition to a circular economy are the regulations that aim to reduce the carbon footprint of the product throughout all life cycle. Arçelik, as an active member of the association, closely follows the new EU energy labelling and eco-design legislation through APPLiA membership, shares comments and opinions with other participants, and takes necessary internal actions to align its products with the 1.5-degree world. Lastly, the CEO of Arçelik has been selected as the President of APPLiA in 2022.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)
1267469

Describe the aim of your organization's funding
Annual membership fee

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization
Non-Governmental Organization (NGO) or charitable organization

State the organization to which you provided funding
World Business Council for Sustainable Development (WBCSD)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)
1112501

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate
Since 2021, we are a member of WBCSD and we actively support workstreams in the Council. We are a member of SOS 1,5, Natural Climate Solutions, Circular Plastics & Packaging, Factor 10 Circular Metrics, CFO Network working groups. CFO Network Program aims to help shape the dialogue and the landscape, working with investors and gaining access to the tools and resources. Workstreams at SOS 1.5 Program are organized to support companies while they are running for well below 1.5 degrees Celsius targets and their ultimate aim for being net-zero companies in 2050. Arçelik joins the projects in these groups to take comprehensive, reliable, and ambitious guidance on how to lead the low carbon transition.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

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
Arcelik_Annual_Report_2021.pdf

Page/Section reference
1-356

Content elements
Governance
Strategy
Emissions figures
Emission targets

Comment
Governance, strategy, risk management, emission figures, emission targets, and other climate-related metrics such as energy consumption, and climate-related awards are shared publicly in Arçelik's annual reports.

Publication
In voluntary sustainability report

Status
Complete

Attach the document
arcelik21_sustainability_report.pdf

Page/Section reference
1-209

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify (Energy efficiency projects, climate-related scenario analysis, low-carbon products, climate-related awards)

Comment
Governance, strategy, risk & opportunities incorporate with TCFD, emission figures, emission targets, and other metrics such as water consumption, energy consumption, energy efficiency projects, climate-related scenario analysis, low-carbon products, and climate-related awards are shared publicly in Arçelik's sustainability reports every year.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	Two members of Arçelik's Board of Directors (BoD), President of the Consumer Durables Group at Koç Holding and CEO of Arçelik, have responsibilities for biodiversity-related issues. President of the Consumer Durables has been appointed based on a BoD Decision to inform the BoD on sustainability-related issues, commitments, targets, and progress including biodiversity studies in the company. Arçelik's CEO is responsible for the approval of biodiversity commitments and budgets.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Adoption of the mitigation hierarchy approach Other, please specify (Implementing actions to reduce pressures and support the natural development of habitats)	SDG Other, please specify (UICN Guideline)

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years	<Not Applicable>

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators Pressure indicators Response indicators

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Impacts on biodiversity Details on biodiversity indicators Biodiversity strategy	Arçelik has built a partnership in 2022 with an environmental consulting company based in Romania. Within this scope, actions will be implemented to reduce pressures and support the natural development of habitats in Ulmi factory (Romania) by 2027. Arcelik_Biodiversity Commitment_Communication Document.pdf

C16. 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.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Financial Officer (CFO)	Chief Financial Officer (CFO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms