

Welcome to your CDP Climate Change Questionnaire 2021

C0. Introduction

C0.1

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

Arçelik A.Ş., founded in 1955, has operations in the consumer durables and electronics sector with production, marketing, and after-sales services. With over 30,000 employees, Arçelik has 22 production plants in 8 countries (Turkey, Romania, Russia, South Africa, Thailand, India, Pakistan, Bangladesh) and offers products and services to almost 150 countries with its 12 brands. It has 15 R&D and Design Centers in Turkey, 13 R&D Offices across 10 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 products that are resource and energy-efficient, innovative in design, and 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 Environmental Management System (EMS), which is integrated with ISO9001 and adopted to Total Quality Approach since 1994. 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 GHG Standard. Arçelik's GHG emissions (Scope 1&2) have been audited and verified by an independent body in "100% verification" and "reasonable assurance" level since 2010. Since 2013 Arçelik's domestic logistics' GHG emissions (Scope 3) have been calculated and verified by an independent body. In 2019 Arçelik has succeeded transition to ISO 14064-1:2018 version 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 (EnMS) which is integrated with EMS and GHG Management System. 10 of Arçelik's production plants achieved a "Platinum" certificate for energy efficiency. Arçelik's environmentally responsive sustainable development approach which is applied in the whole life cycle of the product has been achieved as a result of the mentioned management systems and its vision. At Arçelik, a sustainable product respects the environment and the people who are part of value chain. Arçelik values sustainable procurement of raw materials, sustainable design of each product, and low impact production. Arçelik put great importance on increasing product recyclability and lowering end consumer resource consumption to contribute to the transition to

low carbon economy. 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. Additionally, 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 commissioner of the High-Level Commission on Carbon Pricing and Competitiveness and attends to meetings. Arçelik is the only Turkish company in this commission. Arçelik's CEO also attended to "Dialogue for Climate Action" event which was launched by the World Bank. Arçelik was awarded as "Industry Leader" in Dow Jones Sustainability Indices in 2019 and 2020 in the category of "Emerging Markets". Arçelik received 'AAA', the highest rate in the MSCI Global Sustainability Index Series, and is among the companies listed in the BIST SI. 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, and become one of the 25 companies in the world that achieved this success. In CDP Climate Program, Arçelik has awarded with A- score in 2018-2019-2020. 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 1st Turkish company to win this award in its sector. In addition, Arçelik announced a 350 million Euro Green Bond issuance in 2021. In this scope, we prepared Green Financing Framework including our low-carbon transition plans.

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
Reporting year	January 1, 2020	December 31, 2020	No

C0.3

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

Turkey

C0.4

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

TRY

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
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 to a decision made by the Board of Directors; Arçelik's science-based targets 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	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	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	Climate-related issues are one of the priority agenda items of Sustainability Council meetings cheered by the CFO.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	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	In order to increase motivation, success and productivity of its employees and to materialize best practices and ensure their dissemination; Arçelik evaluates, rewards

		<p>and society projects</p>	<p>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:</p> <ol style="list-style-type: none"> 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. <p>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</p>
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			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 Financial Officer (CFO)	Monetary reward	Energy reduction target	Energy reduction ratio (thus carbon emissions reduction) KPI is a part of the financial compliance target in CFO'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	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 Managersemployees	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 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	Energy reduction ratio (thus carbon emissions reduction) KPI and energy reduction projects 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 ISO 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 theTCFD, 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 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 as 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. In 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 contain 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 2014-2020, the energy-saving as a result of the recycling processes within the two plants is 326 GWh. Between the years of 2014-2020, approximately 160,000 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 2020 in Turkey operations have been calculated and verified as 43,109 tCO₂e, and Scope 3 downstream emissions from activities mentioned above as 15,876,205 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 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 use certain methods to identify the social, economic, and environmental risks including climate change in our value chain. First, we identify the critical suppliers that make up 80% of our purchasing turnover using the Kraljic Analysis Method. Then, we evaluate these critical suppliers in terms of risks within the scope of the Sustainable Supplier Index followed by Code of Conduct Audits. 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 have a target to develop the Supplier Sustainability Index to ensure that the rate of suppliers who are assessed as medium and high risk, remains below 8% by 2020.

We set our responsible supply chain targets, related to climate change, 2024, 2025, and

2030 as follow:

- Apply for the suppliers in Tukey constitute 100% of our purchase turnover to obtain ISO 14001 certificate by 2023
- Apply for the suppliers in Tukey exceeding 1000 TEP to obtain ISO 50001 by 2024
- Apply for all global suppliers exceeding 1000 TEP to obtain ISO 50001 by 2025
- Increase Supplier Sustainability Index Response Rate to 70% by 2030

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	<p>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.</p> <p>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.</p>

Emerging regulation	Relevant, always included	<p>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.</p> <p>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 Production Plants at last 11 years (2010-2020), we have saved nearly 960,000 GJ energy with 1,470 projects. Totally; 89,739 tCO_{2e} GHG emission has been reduced since 2010. Arçelik, starting from 2012, has been using electricity produced from renewable energy source (RES) in Turkey operations. The supply rate of electricity generated from RES, which was realized approximately as 1% in 2012, 28% in 2013, 78% in 2014, 82% in 2015, 88% in 2016, 77% in 2017, 75% in 2018, occurred as 100% in 2019 and 2020.</p>
Technology	Relevant, always included	<p>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</p>

		<p>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).</p> <p>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.</p>
Legal	Relevant, always included	<p>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.</p> <p>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.</p>
Market	Relevant, always included	<p>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</p>

		<p>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 targets.</p>
Reputation	Relevant, always included	<p>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.</p> <p>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.</p> <p>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 commissioner 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.</p>
Acute physical	Relevant, always included	<p>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</p>

		<p>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.</p> <p>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.</p>
Chronic physical	Relevant, always included	<p>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.</p>

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

Company-specific description

Turkey was the first country to sign a grant agreement with the World Bank for Partnership of Market Readiness (PMR) Project. PMR Turkey Project 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. PMR Turkey was set to analytically analyze the suitability and applicability of market-based emission reduction policy instruments, such as emissions trading scheme, carbon tax in detail, in addition to white and green energy certificates, scaled-up crediting mechanism, result-based finance in Turkey. The final output of the PMR Turkey will be a report which will suggest a carbon pricing policy package, in consideration of its economic and sectoral implications. This report will be presented to the Climate Change and Air Management Coordination Board and to the decision-makers. Although there exists no political decision yet, with the activities to be held within PMR Project, Turkey is technically ready for an appropriate carbon pricing mechanism. We believe that a market-based carbon pricing mechanism will come into force in the short term. There will be a necessity for investment to decrease GHG emissions. This will cause a significant increase in costs. 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 annual energy reduction targets and additionally has determined its GHG emission target as Net Zero Emission in production in Turkey by 2025. Arçelik hit the target before expected, became carbon neutral in global operations, details can be found in C11.1d.

Arçelik Sustainability Council contributes these targets every year to increase energy efficiency in production, invest on renewable energy systems and increase the ratio of green electricity to reduce GHG emissions. With energy efficiency projects in Arçelik production plants in the last 11 years (2010-20), it has been saved nearly 960,000 GJ energy with 1,470 projects. Totally; 89,739 tCO₂e emissions have been reduced since 2010. Arçelik, starting from 2012, has been using green electricity, the supply rate of green electricity has reached 100% as of 2019 and 2020.

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)**Potential financial impact figure – minimum (currency)**

0

Potential financial impact figure – maximum (currency)

11,071,923

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 2020 GHG emissions which is 43,109 tCO_{2e}. 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 27.56 EUR per ton CO_{2e} (256.83 TL/tCO_{2e}).

Potential financial impact figure – maximum = (43,109 ton CO_{2e}) * (256.83 TL/tCO_{2e}) = 11,071,923 TL

Cost of response to risk

6,420,000

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's production plants in last 11 years (2010-20), it has been saved nearly 960,000 GJ energy with 1,470 projects.

Totally; 89,739 tCO_{2e} emissions have been reduced since 2010. Arçelik, starting from 2012, has been using green electricity. The supply rate of green electricity reached in 100% as of 2019 and 2020. Only in 2020 we spent approx. 500,000 TL for energy attribute certificates. Besides, investments and costs of energy efficiency projects in 2020 is actualized as 5,919,092 TL. Totally we spent approx. 6,420,000 TL for energy efficiency projects & green electricity supply in 2020. (Cost of response to risk : 5,919,092 TL + 500,000 TL = 6,419,092 TL) (approx. 6,420,000 TL)

Comment

In 2020 we spent approximately 500,000 TL for energy attribute certificates. Besides, investments and costs of energy efficiency projects in 2020 is actualized as 5,919,092 TL. Totally we spent approx. 6,420,00TL for energy efficiency projects & green electricity supply in 2020.

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

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 and Urban Planning and entered into force with publication in Official Journal on 25 April 2012 and with no. 28274, contains calculating and verifying of 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 2020 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)

65,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

ISO 14064 GHG Emission Inventory Verification is a continuous process for Arçelik on yearly basis. The verification for the Ministry has been started in 2017. Total financial implications for both ISO 14064 and GHG Regulation by the Ministry verification processes and training are around 65,500 TL for the verification period for 2020 GHG emissions verification periods.

Cost of response to risk

65,000

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 Guidelines 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 in 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 and Urban Planning (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 2020 is approx. 65,000 TL.

Comment

The total cost of the verification audits of ISO 14064 and Turkish GHG Regulation for GHG emissions generated in 2020 is approx. 65,000 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

Company-specific description

Besides uncertainties regarding the calculation and 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. The intensification of the general tax approach on energy sources and electricity generation from renewable energy sources is not an adequate level. With new legal regulations, it is highly probable that electricity and natural gas costs increase to extend that may cause problems in competition.

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)

11,500,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Between 2019-2020 electricity unit price increased 11.8%.

Since our electricity consumption has been increased by 0.7% compared to 2019, our total electricity cost was increased by approximately 12.7% due to an increase in unit prices. If electricity unit prices have not increased, we would spent about 77.3 million TL for electricity consumption. However, due to increase in unit prices our electricity cost actualized as 86.5 million TL. To mitigate this 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 of 2.3 million TL. If we have not apply this zero-investment project, we would pay 2.3 million TL more for electricity purchases in 2020. Due to increase in electricity unit prices, electricity cost would be 88.8 million TL. (88.8 million TL - 77.3 million TL = 11.5 million TL)

Cost of response to risk

5,919,092

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 132 energy efficiency projects in 2020 and have spent approximately 5.9 M TL.

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 of 2.3 million TL. If we have not apply this zero-investment project, we would pay 2.3 million TL more for electricity purchases in 2020.

Comment

We invested approximately 5.9 million TL to energy efficiency projects during the reporting year. Besides, if the electricity supply methodology have not been changed, energy cost in terms of electricity consumption, would be 2.3 million TL 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

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 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 towards higher energy-efficient products. There is increasing investment needed to use 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)

33,352,440,252

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

82% of Arçelik's revenue came from Turkey and EU sales in 2020. 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 33,352,440,252 TL in 2020 (Total of Arçelik's revenue from Turkey and EU market (4,161,720,000 EUR = 33,352,440,252 TL). (1 EUR has been taken as 8.0141 TL as the average value in 2020)

Cost of response to risk

940,300,000

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, etc.) is around

2,400,000 TL per year to follow the related regulations closely.

To comply with the new labelling regulations Arçelik has environmentally friendly R&D activities. In 2020, the cost of R&D studies for environmentally friendly products is approx. 136,900,000 TL.

In addition, Arçelik took out a loan from the European Bank for Reconstruction and Development (EBRD) more than 100 million Euro (approx. 801,000,000 TL) for the transition to 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 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 8.0141 TL as average value in 2020)

Comment

Membership to some associations (APPLiA, AMDEA, Digital Europe, etc.) is around 2,400,000 TL in 2020 to follow the related regulations closely.

In 2020, the cost of R&D studies for environmentally friendly products is approx. 136,900,000 TL in Turkey operations.

Arçelik took out a loan from the European Bank for Reconstruction and Development (EBRD) more than 100 million Euro (801,000,000 TL) for the transition to a low-carbon economy.

So, the total cost of the response to this risk is calculated as 940,300,000 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

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)

16,200

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

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 4 years, the cost of disposal of the gases to prevent fugitive emissions is approx. 16,200 TL.

Cost of response to risk

9,000,000

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

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Decreased revenues due to reduced production capacity

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)

1,200,000,000

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****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 1.1 billion TL).

Cost of response to risk

1,200,000,000

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 1.2 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 1.2 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

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. As Arçelik, while we are signing a contract for electricity purchasing, we are asking to be sure that energy companies use renewable sources. Starting from 2012 June, we have been using electricity generated from renewable energy sources by increasing the renewable electricity ratio every year. In 2020, we have continued our practice of supplying energy generated from renewable energy resources to our HQ and production plants in Turkey, and purchased 100% of electricity that we used in production plants and HQ from renewable energy sources with I-REC certification. However, there is a financial risk for Arçelik due to renewable energy costs. If we purchase energy attribute certificates with just 0.40 EUR/MWh it will cause, approximately 0.67 million TL extra cost for electricity in Turkey operations.

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)

670,000

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

Nearly 0.67 million TL extra cost for each year in case of purchasing energy attribute certificates as 0.40 EUR/MWh (3.73 TL/MWh).

Arçelik's electricity consumption in 2020 was 179,796 MWh.

Potential financial impact figure (currency) : (179,796 MWh) * (3.73 TL/MWh) = 670,000 TL (approx.)

Cost of response to risk

20,260,000

Description of response and explanation of cost calculation

We aim to decrease our energy consumption and increase our installed renewable energy capacity to 15 megawatts in our operations by 2030. To achieve these goals, we will invest a total of 5.5 million Euro (55.7 million TL) to establish renewable energy

systems and 14.5 million Euro for energy efficiency projects (146.9 million TL) globally (Total 202.6 million TL, annually 20.2 million TL).

Comment

We aim to decrease our energy consumption and increase our installed renewable energy capacity to 15 megawatts in our operations by 2030. To achieve these goals, we will invest a total of 5,5 million Euro (55.7 million TL) to establish renewable energy systems and 14.5 million Euro for energy efficiency projects (146.9 million TL) globally (Total 202.6 million TL, annually 20.2 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

Company-specific description

For the post-2012 period, Turkey has been signed the Paris Agreement in COP21 and submitted its INDC plan which includes the reduction target to the UN Secretariat. But 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)

224,000,000,000

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

Turkish Ministry of Environment and Urbanization's 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 (224.4 billion TL).

Cost of response to risk

30,000,000

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 2020, we allocated approx. 30 million TL in all our production plants in Turkey for environmental expenditure and investments.

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 2020, we allocated approx. 30 million TL in all our production plants in Turkey for environmental expenditure and investments.

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)

2,800,000

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****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. 2.8 million – 5.7 million TL)

Cost to realize opportunity

200,000

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)

21,500,000,000

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****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 2020, the consolidated net sales turnover reached 40.8 billion TL, and international sales comprised 65% of consolidated sales (Approx. 21.5 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

136,900,000

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.

The cost of R&D studies for environmentally friendly products in Turkey is approx. 136.9 million TL in 2020.

Comment

The cost of R&D studies for environmentally friendly products in Turkey is approx. 136.9 million TL in 2020.

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)

197,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

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 2014-2020, the energy-saving as a result of the recycling processes within the two plants is 326 GWh. This amount is

equivalent to the annual energy production of 52 wind turbines with a capacity of 2.5 MW. This means approx. 197 million TL gain to the Turkish economy.

Cost to realize opportunity

9,000,000

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)

21,500,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

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 2020, the consolidated net sales turnover reached 40.8 billion TL, and international sales comprised 65% of consolidated sales (Approx. 21.5 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

136,900,000

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. 136.9 million TL in 2020.

Comment

The cost of R&D studies for environmentally friendly products in Turkey is approx. 136.9 million TL in 2020.

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+. Having said that, 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 are planing to transition to environmentally friendly refrigerants used in refrigerators. It is planning to finalize in the upcoming period.

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)

5,115,680

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

The average energy efficiency class of our refrigerator sales in South Africa increased from “E” to “A” in 5 years, which equals to more than 50% decrease in energy consumption. Between 2019-2020, approx. 8.000.000 kWh energy has been saved during the use of Defy's sold refrigerators in South Africa. According to the 2020 South Africa electricity unit price (0.092 USD/kWh), the potential financial impact figure has been calculated as 736,000 USD equals 5,155,680 TL. (1 USD = 7.005 TL (average value in 2020))

Cost to realize opportunity

2,269,620,000

Strategy to realize opportunity and explanation of cost calculation

Cost of Defy acquisition realized as 324 million USD. (2,269,620,000 TL) (1 USD = 7.005 TL (average value in 2020))

Comment

Cost of Defy acquisition realized as 324 million USD. (2,269,620,000 TL) (1 USD = 7.005 TL (average value in 2020))

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 commissioner 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)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

There is no financial impact of being a commissioner 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 commissioner of the High-Level Commission on Carbon Pricing and Competitiveness in 2019 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 commissioner of the High-Level Commission on Carbon Pricing and Competitiveness.

Comment

Arçelik's CEO became a commissioner of the High-Level Commission on Carbon Pricing and Competitiveness in 2019 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 commissioner 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

Arçelik took out a loan from the European Bank for Reconstruction and Development (EBRD) more than 100 million EUR for transition to 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 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.

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)

33,352,440,252

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

82% of Arçelik's revenue came from Turkey and EU sales in 2020. 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 2020 revenue, this compliance provides to Arçelik its total sales revenue of Turkey and EU markets which is calculated as 33,352,440,252 TL in 2020 (Total of Arçelik's revenue from Turkey and EU market (4,161,720,000 EUR = 33,352,440,252 TL). (1 EUR has been taken as 8.0141 TL as the average value in 2020)

Cost to realize opportunity

801,000,000

Strategy to realize opportunity and explanation of cost calculation

Arçelik took out a loan from European Bank for Reconstruction and Development (EBRD) more than 100 million Euro (730,000,000 TL) for the transition to 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.

Comment

Arçelik took out a loan from European Bank for Reconstruction and Development (EBRD) more than 100 million Euro (801 million 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)

500,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

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 inefficient motors with efficient ones (IE3 and IE4). By transforming remaining inefficient motors, it is estimated to save 500,000 TL yearly.

Cost to realize opportunity

1,300,000

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 1,300,000 TL.

Comment

The investment cost of the energy-efficient motor transformation project is 1,300,000 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 (2,804,935,000 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/>

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)

2,804,935,000

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****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 (2,804,935,000 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/>

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 (2,804,935,000 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/>

C3. Business Strategy

C3.1

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

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, but we intend it to become a scheduled resolution item within the next two years	Arçelik's low-carbon transition plan which includes Arçelik's climate-related risk and opportunity assessment (with both qualitative and quantitative scenario analysis), 2030 science-based targets and 2050 net-zero road maps which include strategies, investments, innovation and financial requirements has already been implemented to Arçelik's Sustainability Council and Board of Directors meetings, and Arçelik's top management score cards. It is planned to be scheduled at Annual General Meetings within the next two years.

C3.2

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

Yes, qualitative and quantitative

C3.2a

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

Climate-related scenarios and models applied	Details
<p>IEA Sustainable development scenario</p> <p>Other, please specify</p> <p>IEA STEPS and Net Zero 2050 scenarios, Trucost ESG Analysis</p>	<p>Arçelik scenario analysis is based on 2 main pillars: Transition and physical risks. Firstly; in conducting the policy-related risks under transition 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 Celsius. The scenario analyses are based on 2030 and 2050 projections. In the high carbon price scenario for 2030, Scope 3 emissions is the largest contributor to Arçelik's carbon pricing risk. Arçelik's risks are included but not limited to the introduction of strict measures by policymakers to keep up with the Paris Agreement and to achieve net zero emissions by 2050, such as the EU Green Deal and ETS schemes:</p> <ul style="list-style-type: none"> -Rising direct and indirect carbon pricing risk based on increased regulatory costs in various countries, increased price of carbon as well as potential carbon taxes and their potential operational cost impact on Arçelik's carbon neutrality roadmap -Rising costs on Arçelik's key production inputs such as steel and glass and potential impact on Arçelik's exports from non-EU countries into the EU due to the application of the Carbon Border Adjustment Mechanism within the EU Green Deal -Increased green electricity prices and the impact on Arçelik's carbon neutrality roadmap for Scope 2 operations. These risks are evaluated as high risk in terms of financial impacts. To manage them, Arçelik set its science-based targets to reducing Scope 1&2 emissions by 30% and Scope 3 emissions from use of sold products by 15% by 2030 compared to 2018. Arçelik became carbon-neutral in global production plants for Scope 1&2 in 2019 and 2020 by offsetting with its own carbon credits obtained through its own VCS registered project. Arçelik has set a carbon neutrality roadmap and it aims to invest an additional USD 50 million until 2030 in renewable energy, other energy projects. In 2019 and 2020, Arçelik purchased 100% renewable electricity for Turkey operations. Arçelik's target is to increase the coverage to 100% to purchase green electricity in all countries where Arçelik has manufacturing (based on the availability of green electricity in those countries). <p>Secondly; based on IEA STEPS, SDS, and Net Zero 2050 scenarios, it is evident that there will be a shift in demand for more energy-efficient appliances as efforts to keep global warming within 2 DC increase. Especially considering the SDS and the Net 2050 scenario, the shift in demand to energy-efficient appliances even in countries where there is no current regulation in place might be faster than expected. Electricity use will soar as the global middle-class demands more major domestic appliances such as refrigerators, washing machines and airconditioners. Considering low dishwasher/washing machine penetration rates in countries like Pakistan and</p>

	<p>Bangladesh where Arçelik has production plants, this effect will be much higher. Regulations such as the EU Energy Labeling Requirements might also be introduced soon in the developing markets. There might be increasing investment needed to use Best Available Technology to stay ahead of regulation and put on the market the best energy class products. Some examples to manage these risks are; in line with Arçelik's SBTs, Arçelik aims to follow a strategy to provide the best energy efficiency class ahead of legislation in the developing countries we operate. Arçelik is well positioned to respond to regulatory changes for energy-efficient products, starting with the EU Energy Efficiency Legislation as of March 2021. Arçelik started introducing high-quality, energy-efficient and "affordable" products that meet the highest environmental standards in Pakistan. The market and technology risks under transition risks are evaluated as high risk in terms of financial impacts.</p>
<p>RCP 2.6 RCP 4.5 RCP 8.5</p>	<p>Arçelik's scenario analysis is based on 2 main pillars: transition risk and physical risks. The physical risk assessments are based on the Trucost Approach that leverages physical risks of Arçelik at the asset level, as well as its suppliers, taking into consideration climate hazard indicators such as water stress, flood, heatwaves, coldwave, hurricane, sea level rise, etc and their impact on Arçelik's operations. The High Climate Scenario (RCP 8.5), the Moderate Climate Scenario (RCP 4.5) and the Low Climate Scenario (RCP 2.6) 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, main risk item being water stress. India, Romania, Turkey (Ankara and Çayırova) sites are prone to high water stress risk. Based on Trucost analysis, Arçelik's suppliers main physical risks are related to water stress as well. Due to these risks, Arçelik might potentially incur reduced revenue and market loss from decreased production capacity, logistics problems, and supply chain interruptions. There might also be a potential CAPEX need in case of damage to production facilities or at a supplier/customer site.</p> <p>Our strategies to manage physical risks and transform them to opportunities are given below:</p> <ul style="list-style-type: none"> - Our production facilities are based in more than one location in order to manage business interruption risks better. - During new acquisition or greenfield investment decisions, land resilience is also factored into the due diligence process. - In order to manage business interruption risks resulting from disruption of Arçelik's supply chain during a potential physical risk, Arçelik takes necessary precautions to diversify its supply chain. Arçelik also gained experience in terms of diversifying the supply chain based on the shortages created by the COVID-19 pandemic. - Based on the results of the physical risk assessment, water stress was the main risk item for Arçelik. For risk adaptation, Arçelik has set its target to increase the water recycling ratio (Water recycling ratio = Total recycled water/Total water withdrawal) to 70% in all production plants by 2030 aiming

	<p>to achieve closed-loop water system in production.</p> <ul style="list-style-type: none"> - The Insurance Management Team under the Enterprise Risk Directorate calculates financial and non-financial risks related to the consequences of climate events such as floods, storms, tsunamis, earthquakes, etc. based on countries where Arçelik production facilities are located in correlation with all related bodies within the company. - Arçelik has several lines of insurance policies globally including Third Part and Pollution policies, all risk Property Damage and Business Interruption policies for the physical and non-physical risks in place to mitigate the adverse consequences as much as possible. - Based on modeling studies, in case any event occurs related with business interruption, compensation methodologies are already defined accordingly.
Other, please specify A2 scenario of IPCC	<p>The fifth assessment report of IPCC states that climate change is extremely likely due to human activities. Based on different scenarios, climate scientists estimate increases between 1.5 and 4.5 oC by the end of the present century. Arçelik has 8 production plants located in Turkey (Eskişehir, İstanbul, Tekirdag, Ankara, Bolu). Turkey is one of the countries that could be profoundly affected by climate change. Arçelik considers climate change impacts to sustain its activities and use climate scenario analysis to assess the impacts. Arçelik use A2 scenario of IPCC. Due to the assessment of climate change impact studies for Turkey are generally based on the A2 scenario of IPCC, we also select this scenario. In addition, the future climate analysis of Turkey based on CMIP3 simulation that was used in the fourth Assessment Report of IPCC. The projection involves the simulation of the ECHAM5 General Circulation Model. For the wind projections, the northwestern parts of Turkey have the highest wind potentials. It could be said that the wind potential in these areas will increase in the future. The wind speeds in the Marmara region and northwestern parts of the Aegean region are projected to increase up to 15% by the mid-century (2041-2070) and up to 20% and more by the end of the century (2071-2099). On the other hand, the wind speeds are simulated to decrease in the eastern parts of Turkey. According to these projections, the most sufficient plants are located in Tekirdağ and İstanbul. Because future projections show that there will be an increase of wind above 15% in these cities and in the current situation the wind average wind speed is sufficient (6.5-7 m/s).</p> <p>For solar radiation, the climate change projections indicate that solar radiation will slightly increase in much of Turkey. The increase will be up to 3% by the mid-century and up to 6% by the end of the century except for eastern Black Sea coastal areas. All Arçelik plants are located in the areas that solar radiation will increase. For the current situation, Turkey has already high solar energy potential due to its geographical location. In line with these projections, Arçelik integrates renewable energy use to its business strategy and working on possible renewable energy production investments and following up the developments in technology and falling costs of renewable energy. Arçelik has target for 2025 and 2030 to invest in 10 MWp & 15MWp</p>

	<p>renewable power plant. According to the Solar Energy Map of Turkey prepared by the Renewable Energy General Directorate, it has been determined that the total annual insolation time is 2741 hours (a total of 7.5 hours per day), and the total solar energy derived per year is 1.527 kWh/m² per year which is better than EU countries. With the actual unit electricity prices in the industry, payback time is around 5-6 years in Turkey (This feasibility is done for 100% self-consumption and including yearly performance loss of PV panels and maintenance/operation costs of the plant). Due to that reason, Arçelik plans to establish 1 MWp solar PV plant on the roof of its Eskisehir plant at 2021. We are also preparing detailed feasibilities in Pakistan, Thailand, and South Africa, where we also have factories. In these countries, unit electricity prices are almost 50% percent higher than electricity prices in Turkey. Solar irradiation levels are also the same or higher than Turkey as well. Because of these reasons, payback time is around 3-5 years in these countries. On the other hand, we constructed a new factory in Romania. This new plant, which is built with the building management system, smart building concept, has LEED Platinum certificate and the most energy-efficient machines and equipment, has 930 kWp solar PV and 700 kW CSP systems. Information on scenario analysis and Turkey's projections mentioned in this section is quoted from A Holistic View of Climate Change and Its Impacts In Turkey Report prepared by İstanbul Policy Center.</p>
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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

		<p>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 136.6 million TL in 2020 in Turkey operations. 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 2014-2020, approximately 160,000 tons of CO₂e emission was prevented and 6.5 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 326 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.</p>
Supply chain and/or value chain	Yes	<p>In 2018, we initiated the in-house Supplier Sustainability Index Project to conduct supplier sustainability risk assessment. We extend this project further as Supplier Sustainability Data Monitoring and Development Project in collaboration with an independent, accredited audit firm. The assessment survey is sent to critical suppliers that are determined according to Kraljic Methodology. Risk levels of the critical suppliers are determined as high, medium, acceptable, good and excellent. Suppliers at "excellent" category are included in the awarding process and evaluated for the certification process which is an evaluation process to certify best performing suppliers. We have approximately 2,000 (direct) sources in more than 50 countries. 259 of our suppliers make up 80% of our purchasing volume according to Kraljic Matrix. Based on the Kraljic Matrix, 8.8% of all suppliers are classed as critical, tier 1 suppliers. We analyzed the sustainability risks in our supply chain and assessed 175 suppliers in 2020 based on those risks. With supplier monitoring through a self-assessment questionnaire that includes qualitative and quantitative metrics via a data collection platform accessible by suppliers we follow our suppliers' current and past three years sustainability performance. The critical and strategic suppliers are</p>

		<p>then sent a questionnaire consisting of economic, environmental, and social dimension. Environmental dimension focuses on environmental and GHG management systems, energy, waste, chemical, water consumption, compliance with legislation. Up to now, 133 of our suppliers were evaluated. 1% of them were included in the High-Risk category and 7% in the Middle Risk category. These suppliers were audited in 2020 within the scope of business ethics. By 2025, we aim to collect and monitor environmental data from approximately 400 suppliers making 90% of our purchasing volume, encourage them to set their own targets and publicly disclose their data. In 2020, we collected environmental data from 60 suppliers in scope of our efforts to reach this target. In addition, we commit to make sure that the ISO 14001 certificate apply for approximately 400 suppliers making 90% of our purchasing volume by 2023. In 2020, 68.6% of all critical suppliers have ISO 14001 certificate. 12 million kWh of energy was saved through 132 efficiency projects conducted with 52 suppliers in 2020.</p>
Investment in R&D	Yes	<p>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 136.9 million TL in Turkey operations were allocated to R&D studies in 2020. In 2020, 50% 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 2020, we improved the average energy consumption of tumble dryer products in Turkey by 23%, refrigerators, dishwashers, and washing machines by 4%, 3%, and 1%, respectively, compared to 2019. 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 to 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.</p>
Operations	Yes	<p>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</p>

	<p>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. The company set target to increase our renewable energy installed capacity by 2030 to 15 MW. In line with this target, Arçelik invested for 930 kWp solar PV and 700 kWp CSP systems. 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 50 million USD. With energy efficiency projects in Arçelik production plants between 2010-2020, we saved nearly 960,000 GJ energy with 1,470 projects. Totally; 89,739 tCO₂e GHG emission has been reduced since 2010. Arçelik, starting from 2012, has been using electricity produced from RES. The supply rate of electricity generated from RES, which was realized approximately as 1% in 2012, 75% in 2018 and 100% in 2019 and 2020. Arçelik had a target to become carbon neutral in Turkey in manufacturing as of 2025. However, before 6 years of its target, Arçelik achieved to be carbon-neutral not only in Turkey operations but also global manufacturing plants for Scope 1&2 emissions in 2019&2020 by using carbon credits from its own VCS carbon financing project. 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&2 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. 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.</p> <p>Arçelik's 2050 Net-Zero Road Map: https://www.arcelikglobal.com/en/sustainability/in-touch-with-our-planet/combating-the-climate-crisis/</p>
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C3.4

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

Financial planning elements that	Description of influence
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	have been influenced	
Row 1	Revenues Direct costs Indirect costs Capital expenditures	<p>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 2020, 50% of Arçelik's revenue was generated through the sale of energy-efficient products. In 2020,Arçelik generated 47% of its revenues from Europe and 35% 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+.</p> <p>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 2020, with 132 energy efficiency projects carried out in Turkey, financial savings of around approx. 477,000 EUR were obtained and 3,920 tCO₂e GHG emissions were prevented. In comparison to 2010 baseline, energy consumption per product decreased by 46.37%.</p> <p>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 recycled PET bottles in the washing machine tubs. By recycling more than 58 million PET bottles since the project started, we have helped prevent 2,200 tCO₂e emissions. We also achieved cost savings in production. Aside from cost</p>

	<p>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.</p> <p>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 65,000 TL for the verification period in 2020. 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.</p> <p>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 2020, we allocated EUR 6.98 million in all our plants in the reporting scope for environmental expenditure and investments. In Romania, we are constructing a new factory, Arctic 4.0 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</p>
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		<p>EUR 30 per ton of CO₂e** carbon is applied for investments higher than EUR 50,000 capital cost and 50 kW capacity. 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.</p> <p>Our commitment to produce sustainable and innovative products results in investments in R&D expenditures. In 2020, TL 136.9 million R&D expenditures were allocated for environmentally friendly products in Turkey.</p>
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C3.4a

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

Arçelik's strategy involves embracing sustainability as a business model and embedding sustainability into core company strategy to leverage company and brand value and differentiate from competitors. Board of Directors and the Executive Management Team are directly involved in the company's sustainability strategy road map. A member of the Board of Directors is appointed to inform the Board of Directors on sustainability-related operations, strategies, decisions. There is a Sustainability Council chaired by the CFO which meets quarterly to discuss sustainability operations, make important decisions on sustainability investments and strategies. Arçelik's efforts to combat climate change will continue in the areas of responsible production and consumption as well as the circular economy. In this regard, our sustainability practices primarily serve SDG12, Responsible Production and Consumption, SDG 7, Affordable and Clean Energy as well as SDG 13, Climate Action, SDG 17, Partnership for the Goals. The operations carried out to combat climate change and resource scarcity is indicated below:

Long term 2030 targets linked to SGD's:

- 45% energy consumption reduction and water withdrawal reduction targets per product compared to the base year 2015 for our Turkey, Romania, Russia, South Africa, Pakistan, Thailand, and Bangladesh operations.
- Establishing renewable energy systems with 15 MW capacity target
- Purchasing 100% green electricity in global manufacturing plants target
- Making an additional USD 50 million investment in renewable energy and energy efficiency target
- Increasing the water recycling ratio to 70% in all manufacturing plants target
- Approved science-based target by SBTi: Reducing Scope 1&2 emissions by 30% and Scope 3 GHG emissions from use of sold products by 15% targets by 2030 compared to the base year 2018
- Increasing the waste recycling rate to 99% in global operations target
- Reaching the target of 450 MW Arçelik-branded PV panel sales per year by 2025
- Increasing recycled plastic content to 40% target
- Increasing bio-based material content to 5% target
- Standardize Arçelik Green Chemistry Management System in products and production globally

GHG Mitigation:

- Through the Carbon Financing Project for Energy Efficient Refrigerators we implemented in Turkey in 2013, we received the right to 305,407 tons of carbon credit earned between 2013-2018. These carbon credits have been verified by a third-party verification company in compliance with the Verified Carbon Standard (VCS). Arçelik used its own carbon credits to offset our direct (Scope 1) and indirect-energy (Scope 2) GHG emissions generated in global manufacturing plants* in 2019 and 2020. Thus, we became carbon-neutral in global manufacturing plants* for Scope 1 and 2 in 2019 and 2020 without purchasing any carbon offset credit. In line with its carbon neutrality roadmap and 2030 targets, Arçelik commits to make an additional investment of USD 50 million in energy efficiency, green electricity purchases and renewable energy systems. (* *Singer Plants in Bangladesh and joint venture plants are excluded*)
- Arçelik's 2030 GHG emissions reduction targets were approved in 2020 by the Science-Based Targets initiative (SBTi), for working toward a "well below 2°C" scenario in line with the Paris Agreement. Arçelik commits to reduce its absolute Scope 1 and 2 GHG emissions by 30%; and reduce its absolute Scope 3 GHG emissions from the use of sold products by 15% by 2030 from a 2018 base year.
- Arçelik has implemented a total of 238 energy efficiency projects in our manufacturing plants included in the 2020, and saved approximately 56,000 GJ of energy. This increase in efficiency resulted in a reduction of 5,217 tons of CO₂e emissions and a financial saving of EUR 701,409.
- 100% green electricity is procured in Turkey and Romania manufacturing plants in 2020, making up more than 75% of global electricity consumption of manufacturing plants.
- Scope 1 and Scope 2 GHG emissions were reduced by 73% in Turkey operations compared to 2010.
- 3,171 GJ of electricity was generated with 930 kWp installed capacity of photovoltaic solar panels in the Washing Machine Plant in Romania, preventing 238 tons of CO₂e GHG emissions.
- In 2020, 50% 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 2020, we improved the average energy consumption of tumble dryer products in Turkey by 23%, refrigerators, dishwashers, and washing machines by 4%, 3%, and 1%, respectively, compared to 2019.
- We had been using the Implicit Carbon Price Model since 2010. However, in 2020 we switched to a 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 our global business operations.
- We started to conduct life cycle assessment (LCA) studies for our products. As Arçelik, we completed the life cycle assessment study for the first time for one of our washing machines.
- We provide energy efficiency by using our own production "WAT" and "TEE" the energy-efficient electric motors (IE3 and IE4) in our production plants.
- We engage with suppliers to work on energy efficiency projects. A total of 12 million kWh of energy was saved through 132 efficiency projects conducted with 52 suppliers in 2020.
- We comply with New EU Energy Labelling regulation requirements to create energy-efficient products to mitigate Scope 3 emissions in product use phase.
- Delivery Partnership Agreement with SE4ALL with the aim to increase clean and affordable energy solutions in the developing World
- Partnering with U4E to support the transition to energy-efficient refrigerators in households, supporting Kigali Amendment to reduce production and consumption of F gases.
- Working on a solar refrigerator that runs on solar to provide clean energy solutions.

Water Efficiency:

- Over the course of 11 years, we have saved 1.98 million m3 of water with water efficiency and rainwater harvesting projects.

Pioneering sustainable innovation and circular economy solutions:

- Using recycled PET bottles in washing machine tubs: 28.2 million recycled PET bottles have been used in 2020
- Using ghost fishing nets in oven plastic parts in serial production: 8 tons of ghost fishing nets used between 2019-2020
- Microfiber filter washing machine: Developing a microfiber filter washing machine that will filter 90% of the microplastics that break away from clothes and get discharged to waterways
- Bio-plastics: Developing bioplastics from natural resources such as corn starch. Working on developing a bioplastic refrigerator
- Two WEEE (Waste Electrical and Electronic Equipment) Recycling facilities, collecting old products from the customers, replacing them with new, energy-efficient ones. Between 2014-2020, 326 GWh energy savings have been obtained from recycling, 160,000 tons of CO₂e were prevented.

C4. Targets and performance

C4.1

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

Both absolute and intensity targets

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) (or Scope 3 category)

Scope 1+2 (location-based)

Base year

2018

Covered emissions in base year (metric tons CO₂e)

162,786

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2030

Targeted reduction from base year (%)

30

Covered emissions in target year (metric tons CO₂e) [auto-calculated]

113,950.2

Covered emissions in reporting year (metric tons CO₂e)

114,640

% of target achieved [auto-calculated]

98.5875116206

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 (including target coverage)

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. This target covers not only Turkey operations but also 100% of company-wide Scope 1-2 emissions. Base year and reporting year emissions shared above are company-wide total Scope 1&2 emissions (not only GHG emissions of Turkey operations).

Target reference number

Abs 2

Year target was set

2020

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 3: Use of sold products

Base year

2018

Covered emissions in base year (metric tons CO2e)

22,921,834

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2030

Targeted reduction from base year (%)

15

Covered emissions in target year (metric tons CO2e) [auto-calculated]

19,483,558.9

Covered emissions in reporting year (metric tons CO2e)

22,040,094

% of target achieved [auto-calculated]

25.644835691

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 (including target coverage)

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 100% of company-wide Scope 3 emissions from the use of the sold products. Base year and reporting year emissions shared above are company-wide total Scope 3 emissions (not only GHG emissions of Turkey operations).

Target reference number

Abs 3

Year target was set

2021

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based) +3 (upstream & downstream)

Base year

2018

Covered emissions in base year (metric tons CO2e)

28,630,295

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2050

Targeted reduction from base year (%)

100

Covered emissions in target year (metric tons CO2e) [auto-calculated]

0

Covered emissions in reporting year (metric tons CO2e)

25,676,985

% of target achieved [auto-calculated]

10.3153320635

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

Target ambition

Other, please specify

This is Arçelik's 2050 Net Zero Target.

Please explain (including target coverage)

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).

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, using alternative low-carbon fuel for product logistics, etc. To offset our residual 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/>

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

2015

Target coverage

Country/region

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Intensity metric

Metric tons CO₂e per unit revenue

Base year

2010

Intensity figure in base year (metric tons CO₂e per unit of activity)

0.0000356

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

100

Target year

2025

Targeted reduction from base year (%)

100

Intensity figure in target year (metric tons CO₂e per unit of activity) [auto-calculated]

0

% change anticipated in absolute Scope 1+2 emissions

-100

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year (metric tons CO2e per unit of activity)

0

% of target achieved [auto-calculated]

100

Target status in reporting year

Achieved

Is this a science-based target?

No, but we are reporting another target that is science-based

Target ambition**Please explain (including target coverage)**

Arçelik's target was to reduce total Scope 1&2 emissions of its domestic production plants in Turkey from 2010 (base year) to 2025 by 100% per sales revenue* by implementing new energy efficiency projects (emission reduction projects), using the electricity generated from renewable energy sources, and carbon credits to offsets the residuals. Five years before the target year, Arçelik achieved to become carbon neutral in its global manufacturing plants for Scope 1 and Scope 2 emissions in 2019 and 2020 fiscal years. So, Arçelik achieved its intensity target for 2025. To become carbon neutral, Arçelik reduced its Scope 1&2 emissions and used carbon credits generated by its own VCS project named Carbon Financing Project for Energy Efficient Refrigerators.

Target reference number

Int 2

Year target was set

2021

Target coverage

Country/region

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based) + 3 (upstream and downstream)

Intensity metric

Metric tons CO2e per unit revenue

Base year

2018

Intensity figure in base year (metric tons CO2e per unit of activity)

0.001482908

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

100

Target year

2050

Targeted reduction from base year (%)

100

Intensity figure in target year (metric tons CO₂e per unit of activity) [auto-calculated]

0

% change anticipated in absolute Scope 1+2 emissions

-100

% change anticipated in absolute Scope 3 emissions

-100

Intensity figure in reporting year (metric tons CO₂e per unit of activity)

0.00088376

% of target achieved [auto-calculated]

40.4035853876

Target status in reporting year

Underway

Is this a science-based target?

No, but we are reporting another target that is science-based

Target ambition

Please explain (including target coverage)

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).

We will reduce our Scope 1 and Scope 2 emissions by implementing energy efficiency projects, 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, using alternative low-carbon fuel for product logistics, etc. To offset our residual 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/>

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

2016

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

MWh

Target denominator (intensity targets only)

Base year

2016

Figure or percentage in base year

0

Target year

2020

Figure or percentage in target year

6

Figure or percentage in reporting year

2.005

% of target achieved [auto-calculated]

33.4166666667

Target status in reporting year

Expired

Is this target part of an emissions target?

Yes, the result of this target (Low 1) will affect our Abs 1, Abs 2, Abs3, Int 1, and Int 2 targets.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

We are working on possible renewable energy production investments and following up the developments in technology and falling costs of renewable energy. Arçelik has a target to establish renewable energy systems with a total capacity of 6 MWp (nearly 7,800 MWh annual electricity production), by the end of 2020. In 2018, we established 1.63 MWp solar power plant. In 2019, we established 0.375 MW installed capacity solarwall in Çayırova Washing Machine Plant, Turkey. Totally, installed capacity in terms of renewable energy plants has been reached to 2 MW, therefore target is not met. Despite the increase in the technological advancements in renewable energy coupled with increased efficiencies and decreased costs, the payback period of renewable energy investments is still considerably long. The fact that FX rates increased in countries we operate also affected the long payback period for renewable energy investments. Therefore, although we continue to invest in renewable energy in different technologies and capacities as pilot investment projects, our focus is more concentrated on energy efficiency projects with a shorter payback period. On the other hand, we have set new ambitious targets for 2025 and 2030 to increase the installed renewable energy capacity, as it can be seen from Low 2 and Low 3 targets.

Target reference number

Low 2

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

MWh

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

2

Target year

2025

Figure or percentage in target year

10

Figure or percentage in reporting year

2

% of target achieved [auto-calculated]

0

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, the result of this target (Low 2) will affect our Abs 1, Abs 2, Abs 3, Int 1, and Int 2 targets.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

We are working on possible renewable energy production investments and following up on the developments in technology and falling costs of renewable energy. As Arçelik, we have set a target to establish renewable energy systems and reach 10 MW capacity as of 2025 not only in Turkey but also in our all global operations.

Target reference number

Low 3

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

MWh

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

2

Target year

2030

Figure or percentage in target year

15

Figure or percentage in reporting year

2

% of target achieved [auto-calculated]

0

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, the result of this target (Low 3) will affect our Abs 1, Abs 2, Abs 3, Int 1, and Int 2 targets.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

We are working on possible renewable energy production investments and following up the developments in technology and falling costs of renewable energy. As Arçelik, we have set a target to establish renewable energy systems and reach 15 MW capacity as of 2030 not only in Turkey but also in our all global operations.

Target reference number

Low 4

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Percentage

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

71.86

Target year

2030

Figure or percentage in target year

100

Figure or percentage in reporting year

75.02

% of target achieved [auto-calculated]

11.2295664534

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, the result of this target (Low 4) will affect our Abs 1, Abs 2, Abs 3, Int 1, and Int 2 targets.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Arçelik sets a target to increase the supply rate of electricity which is generated from renewable energy sources (RES) to 100% in its all global production operations. Arçelik in its Turkey operations, starting from 2012, has been consuming electricity which is generated from renewable energy sources (RES). The supply rate of electricity generated from RES reached to 75.02% in 2020 for Arçelik's global production operations. (We have reached 100% both for Turkey and Romania production operations) Our target is to reach 100% in Arçelik's global production operations.

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

2016

Target coverage

Country/region

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

2010

Figure or percentage in base year

0

Target year

2020

Figure or percentage in target year

45

Figure or percentage in reporting year

46.37

% of target achieved [auto-calculated]

103.0444444444

Target status in reporting year

Achieved

Is this target part of an emissions target?

Yes, the result of this target (Oth 1) will affect our Abs 1, Abs 2, Int 1, and Int 2 targets.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Arçelik has a target to reduce its energy consumption per product in Turkey, Romania, China*, Russia, and South Africa operations by 45% in 2020, in comparison with the base year of 2010. As of 2020, target is met and energy consumption per product has been reduced by 46.37% in 2020 compared to the base year of 2010.

Arçelik Sustainability Report 2020 pg.59

https://www.arcelikglobal.com/media/6347/sustainability_report_2020.pdf

*China plant has been sold in September 2020. Thus, only January to September figures for 2020 were taken in to account for China plant.

Target reference number

Oth 2

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

19.61

% of target achieved [auto-calculated]

43.5777777778

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, the result of this target (Oth 2) will affect our Abs 1, Abs 2, Int 1, and Int 2 targets.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Arçelik has a target to reduce its energy consumption per product in Turkey, Romania, Russia, South Africa, Thailand, Pakistan, Bangladesh operations by 45% in 2030, in comparison with the base year of 2015. Target was set in 2019. As of 2020, target is underway and according to 2020 figures 19.61% decrease compared to 2015 baseline.

Announcement of 2025 and 2030 targets in Sustainability Report 2019, pg.13:

https://www.arcelikglobal.com/media/5833/arcelik_master_eng_online_1808.pdf

Announcement of 2025 and 2030 targets in Sustainability Report 2020, pg.23:

https://www.arcelikglobal.com/media/6347/sustainability_report_2020.pdf

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 CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	134	10,573.4
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)

1,962.52

Scope(s)

Scope 1
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

1,862,431

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

31,500

Payback period

<1 year

Estimated lifetime of the initiative

11-15 years

Comment

Process optimization projects are usually low-budget activities, thus they have short-term payback periods such as implementing new sensors or 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 production processes
Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

2,442.14

Scope(s)

Scope 1
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

2,460,925

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

2,802,778

Payback period

1-3 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
Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)

746.36

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

757,695

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

229,039

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

Compression losses can be reduced by using fittings with low losses, revising and optimizing 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
Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)

595.38

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

652,516

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

1,317,322

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 feasibilities.

Initiative category & Initiative type

Energy efficiency in production processes
Automation

Estimated annual CO2e savings (metric tonnes CO2e)

300.62

Scope(s)

Scope 1
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

324,123

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

180,180

Payback period

<1 year

Estimated lifetime of the initiative

11-15 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
Waste heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)

296.16

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

245,995

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

449,250

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 buildings
 Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)

172.97

Scope(s)

Scope 1
 Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

170,550

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

146,000

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

Implementing high efficient HVAC technologies reduce the GHG emissions 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
Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)

153.83

Scope(s)

Scope 1
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

158,025

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

577,000

Payback period

4-10 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 be met, can help us to decrease natural gas consumption and increase the cooling systems' efficiency.

Initiative category & Initiative type

Energy efficiency in production processes
Other, please specify
Insulation

Estimated annual CO2e savings (metric tonnes CO2e)

116.48

Scope(s)

Scope 1

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

107,357

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

64,215

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

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

72.38

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

71,071

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

104,308

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Lighting projects include the changing of inefficient lighting armatures (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 usage in plants etc.

Initiative category & Initiative type

Energy efficiency in buildings
Building Energy Management Systems (BEMS)

Estimated annual CO2e savings (metric tonnes CO2e)

22.09

Scope(s)

Scope 1
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

18,224

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

5,000

Payback period

<1 year

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

Energy efficiency in production processes

Smart control system

Estimated annual CO2e savings (metric tonnes CO2e)

9.56

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

9,662

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

0

Payback period

No payback

Estimated lifetime of the initiative

6-10 years

Comment

As Arçelik, we are implementing the Machine Learning and Artificial Intelligence algorithms to our processes to decrease the product test times. It will help us to decrease the cycle times and lead to increase quantity of tested products in same time period. Therefore, processes' energy efficiency is increased while preventing the GHG emissions.

Initiative category & Initiative type

Energy efficiency in buildings

Insulation

Estimated annual CO2e savings (metric tonnes CO2e)

2.91

Scope(s)

Scope 1

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

2,496

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

12,500

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 maintain or renew the necessary spots.

Initiative category & Initiative type

Waste reduction and material circularity
 Product/component/material recycling

Estimated annual CO2e savings (metric tonnes CO2e)

2,200

Scope(s)

Scope 3

Voluntary/Mandatory

Voluntary

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

10,000,000

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 PP, PA, PE and 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. To date, Arçelik has used approximately 58 million recycled PET bottles, including 28.2 million in 2020 alone, to produce high-performance, eco-friendly washing machine and washer-dryer tubs. Through this, we reduced our CO₂ emissions by 2,200 tons and saved 19,000 GJ of energy by reducing the use of virgin plastics. 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)

1,480

Scope(s)

Scope 3

Voluntary/Mandatory

Voluntary

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

65,000,000

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 2020, the number of remanufactured products is approx. 30,000 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 1,480 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

	<p>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.</p>
Dedicated budget for energy efficiency	<p>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.</p>
Dedicated budget for low-carbon product R&D	<p>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.</p>
Financial optimization calculations	<p>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.</p>
Marginal abatement cost curve	<p>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.</p>
Partnering with governments on technology development	<p>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.</p>

C4.5

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

Yes

C4.5a

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

Level of aggregation

Company-wide

Description of product/Group of products

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.

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

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify
2009/125/EC and 2010/30/EU Directives

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

50

Comment

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 2020, 50% 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 2020, we improved the average energy consumption of tumble dryer products in Turkey by 23%, refrigerators, dishwashers, and washing machines by 4%, 3%, and 1%, respectively, compared to 2019. Avoided emissions from these products in 2020 have been calculated as 16,799 tons.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO₂e)

77,038

Comment

Scope 1 GHG emissions in the base year 2010 have been calculated as 77,038 metric tons CO₂e according to ISO 14064-1 Standard.

Scope 2 (location-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO₂e)

80,687

Comment

Scope 2 GHG emissions in the base year 2010 have been calculated as 80,687 metric tons CO₂e according to ISO 14064-1 Standard.

Scope 2 (market-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO₂e)

0

Comment

There were no market-based Scope 2 GHG emissions in the base year 2010.

C5.2

(C5.2) 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)

43,109

Comment

Arçelik's Scope 1 emissions in Turkey operations have been calculated and verified as 43,109 tons CO₂e in 2020.

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

0

Scope 2, market-based (if applicable)

0

Comment

For the reporting period between 01.01.2020 to 31.12.2020, 100% of electricity has been purchased from hydropower renewable energy plant in Turkey, Menzelet HEPP for Arçelik HQ and production plants in Turkey. The redemption statements were produced for all Arçelik locations that are in reporting scope of CDP 2021 in line with the International Renewable Energy Certificates (I-RECs) standard by the electricity supplier. Although Arçelik reports both location-based and market-based Scope 2 emissions, location-based Scope 2 emissions have been reported as zero in 2020 since there was no electricity from non-renewable sources which are the sources that we can use grid electricity emission factor. 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 which is also indicated in our I-REC certifications. Therefore, our Scope 2 emissions in 2020 in Turkey operations have been calculated and verified 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

Metric tonnes CO₂e

1,979,159

Emissions calculation methodology

The sources of indirect GHG emissions from purchased goods and services 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, and hood produced in Arçelik's production plants in Turkey. 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.

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, and hood produced in Arçelik's production plants in Turkey. 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.

Capital goods

Evaluation status

Not relevant, explanation provided

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 2020.

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

Evaluation status

Not relevant, explanation provided

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

Please explain

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

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

2,176

Emissions calculation methodology

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.

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 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.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

460,512

Emissions calculation methodology

Indirect GHG emissions from business travel include GHG emissions of international and domestic travel by road, railway, and airways. 100% of business travels in Arçelik Turkey 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.

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 of international and domestic travel by road, railway, and airways. 100% of business travels in Arçelik Turkey 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.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

45,936

Emissions calculation methodology

Indirect GHG emissions from employee commuting include GHG emissions of 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 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.

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 of 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 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.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

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

Downstream transportation and distribution**Evaluation status**

Relevant, calculated

Metric tonnes CO2e

130,472

Emissions calculation methodology

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 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

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 2020. 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

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

Metric tonnes CO2e

15,728,569

Emissions calculation methodology

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 Turkey 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 which are supplied from different countries (not only from Turkey) 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 are 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 that 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.

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 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 Turkey 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 which are supplied from different countries (not only from Turkey) 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 are 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 that 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

Metric tonnes CO₂e

15,993

Emissions calculation methodology

GHG emissions in this category are generated by the recycling and/or disposal process of waste electrical and electronics equipment (WEEE) which 10 years life time 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, and hood produced in Arçelik's production plants in Turkey. GHG emissions are calculated by multiplying product weights (as WEEE) with WEEE recycling emission factors. The weights of the products 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.

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, and hood produced in Arçelik's production plants in Turkey. 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.

Downstream leased assets

Evaluation status

Relevant, not yet calculated

Please explain

GHG emissions from downstream leased assets have not been calculated yet.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Arçelik has no franchising activities.

Investments

Evaluation status

Not relevant, explanation provided

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

Metric tonnes CO₂e

5

Emissions calculation methodology

GHG emissions from biological wastewater treatment processes in wastewater treatment plants of industrial zone or municipalities have been calculated. 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. All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards.

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. 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

Metric tonnes CO₂e

1,171

Emissions calculation methodology

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 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.

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 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.

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.

	CO ₂ emissions from biogenic carbon (metric tons CO ₂)	Comment
Row 1	120	GHG emissions generated during biological wastewater treatment of Arçelik's Turkey operations have been calculated as 120 tons CO ₂ e in 2020. This amount covers GHG emissions generated in both wastewater

		treatments in Arçelik's production sites (115 tons CO ₂ e in Scope 1) and industrial zones or municipalities (5 tons CO ₂ e in Scope 3).
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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

0.00000207

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

43,109

Metric denominator

unit total revenue

Metric denominator: Unit total

20,831,953,868

Scope 2 figure used

Market-based

% change from previous year

33

Direction of change

Decreased

Reason for change

Scope 1 and Scope 2 greenhouse gas emissions per Turkey operations revenue decreased by 33% in 2020 compared to the previous year. The main reasons for this decrease are energy efficiency projects performed in Arçelik's production plants, and an increase in revenue compared to the previous year.

For the reporting period between 01.01.2020 to 31.12.2020, 100% of electricity has been purchased from hydropower renewable energy plant in Turkey, Menzelet HEPP for Arçelik HQ and production plants in Turkey. The redemption statements were produced for all Arçelik locations that are in reporting scope of CDP 2021 in line with the International Renewable Energy Certificates (I-RECs) standard by the electricity supplier. Although Arçelik reports both location-based and market-based Scope 2 emissions, location-based Scope 2 emissions have been reported as zero in 2020 since there was no electricity from non-renewable sources which are the sources that we can use grid electricity emission factor. 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 which is also

indicated in our I-REC certifications. Due to that reason, "market-based" has been selected in "Scope 2 figure used" section above.

In our Turkey production operations, we have applied 132 energy efficiency projects only in 2020. Thanks to these projects, approximately 69,800 GJ energy has been saved and 6,893 tCO₂e have been prevented annually.

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 CO ₂ e)	GWP Reference
CO ₂	36,615	IPCC Fifth Assessment Report (AR5 – 100 year)
CH ₄	45	IPCC Fifth Assessment Report (AR5 – 100 year)
N ₂ O	64	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	6,103	IPCC Fifth Assessment Report (AR5 – 100 year)
Other, please specify Chemicals	167	IPCC Fifth Assessment Report (AR5 – 100 year)
Other, please specify Biological wastewater treatment	115	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 CO ₂ e)
Turkey	43,109

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 CO ₂ e)	Latitude	Longitude
Ankara Dishwasher Plant	1,950	39.97582	32.563568
Çerkezköy Tumble Dryer and Electric Motors Plant	4,465	41.306196	27.965484
Bolu Cooking Appliances Plant	9,676	40.763176	31.64291
Çerkezköy Electronics Plant	1,462	41.31463	27.97888
Eskişehir Refrigerator and Compressor Plant	10,577	39.746225	30.618559
Çayırova Washing Machine Plant	14,091	40.821279	29.361822
Sütlüce Headquarter	888	41.047518	28.941751

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Turkey	0	0	0	179,797

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 CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
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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

C7.9

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

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	100% of electricity consumed in both 2019 and 2020 in Turkey operations have been supplied from renewable energy sources. Due to that reason, there is no change in renewable energy consumption. Correspondingly, Scope 2 emissions from renewable sources (market-based) have been calculated as zero in both 2019 and 2020. So, there is no change in emissions value (percentage).

Other emissions reduction activities	4,791	Decreased	10	Thanks to energy efficiency and transition to low-carbon production studies realized in our production plants in Turkey, 4,791 tons CO ₂ e have been prevented in 2020 when it is compared to 2019. In 2019, the total Scope1+2 emissions were 47,900 tons CO ₂ e. Calculation of the emission value (percentage)= (4,791)/(47,900)x100 = 10%
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	0	No change	0	There is no GHG emission change from a change in output.
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?

Market-based

C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization 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)	LHV (lower heating value)	0	177,508.71	177,508.71
Consumption of purchased or acquired electricity		179,796.93	0	179,796.93
Consumption of self-generated non-fuel renewable energy		0		0

Total energy consumption		179,796.93	177,508.71	357,305.64
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C8.2b

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

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

C8.2c

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

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

161,359.13

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

130,375.98

MWh fuel consumed for self-cogeneration or self-trigeneration

30,983.15

Emission factor

0.0561

Unit

metric tons CO2 per GJ

Emissions factor source

IPCC Guidelines for National Greenhouse Gas Inventories Chapter 2: Stationary Combustion- Volume 2: Energy Intergovernmental Panel on Climate Change 2006, Table 2.2: Default emission factors for stationary combustion in the energy industries, Table 2.3: Default emission factors for stationary combustion in manufacturing industries and construction

Comment

Natural gas is consumed to acquire process heat, provide space heating, and generate electricity in cogeneration plant.

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

5,868.51

MWh fuel consumed for self-generation of electricity

261.63

MWh fuel consumed for self-generation of heat

5,606.88

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.0741

Unit

metric tons CO2 per GJ

Emissions factor source

IPCC Guidelines for National Greenhouse Gas Inventories Chapter 2: Stationary Combustion- Volume 2: Energy Intergovernmental Panel on Climate Change, Table 2.2: Default emission factors for stationary combustion in the energy industries, Table 2.3: Default emission factors for stationary combustion in manufacturing industries and construction

IPCC Guidelines for National Greenhouse Gas Inventories Chapter 3: Mobile Combustion- Volume 2: Energy Intergovernmental Panel on Climate Change 2006, Table 3.2.1: Road transport default CO2 emissions factors and uncertainty ranges, Table 3.2.2: Road transport N2O and CH4 default emissions factors and uncertainty ranges

Comment

Diesel is consumed for both mobile and stationary (Diesel Gensets) combustion.

Fuels (excluding feedstocks)

Fuel Oil Number 4

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

3,789.98

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

3,789.98

Emission factor

0.0774

Unit

metric tons CO2 per GJ

Emissions factor source

IPCC Guidelines for National Greenhouse Gas Inventories Chapter 2: Stationary Combustion- Volume 2: Energy Intergovernmental Panel on Climate Change, Table 2.2: Default emission factors for stationary combustion in the energy industries, Table 2.3: Default emission factors for stationary combustion in manufacturing industries and construction

Comment

Fuel Oil No.4 is consumed in cogeneration plant.

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

3,203.49

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

3,203.49

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.0693

Unit

metric tons CO2 per GJ

Emissions factor source

IPCC Guidelines for National Greenhouse Gas Inventories Chapter 3: Mobile Combustion- Volume 2: Energy Intergovernmental Panel on Climate Change 2006, Table 3.2.1: Road transport default CO2 emissions factors and uncertainty ranges, Table 3.2.2: Road transport N2O and CH4 default emissions factors and uncertainty ranges, Table 3.3.1 Default Emission Factors For Off-Road Mobile Sources And Machinery

Comment

Gasoline is consumed in mobile combustion.

Fuels (excluding feedstocks)

Liquefied Petroleum Gas (LPG)

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

2,666.47

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

2,666.47

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.0631

Unit

metric tons CO2 per GJ

Emissions factor source

IPCC Guidelines for National Greenhouse Gas Inventories Chapter 2: Stationary Combustion- Volume 2: Energy Intergovernmental Panel on Climate Change, Table 2.2:

Default emission factors for stationary combustion in the energy industries, Table 2.3:
 Default emission factors for stationary combustion in manufacturing industries and construction
 IPCC Guidelines for National Greenhouse Gas Inventories Chapter 3: Mobile Combustion- Volume 2: Energy Intergovernmental Panel on Climate Change 2006, Table 3.2.1: Road transport default CO₂ emissions factors and uncertainty ranges, Table 3.2.2: Road transport N₂O and CH₄ default emissions factors and uncertainty ranges

Comment

LPG is consumed in both mobile and stationary combustion.

Fuels (excluding feedstocks)

Acetylene

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

387.83

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

387.83

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

3.38

Unit

metric tons CO₂ per metric ton

Emissions factor source

Stoichiometric CO₂ calculation was made.

$2\text{H}_2\text{C}_2 + 5\text{O}_2 \rightarrow 4\text{CO}_2 + 2\text{H}_2\text{O}$

52 gr H₂C₂ = 176 gr CO₂ tons CO₂ / tons H₂C₂ = 3.38

Comment

Acetylene is consumed for welding processes. Stoichiometric CO₂ calculation has been done.

Fuels (excluding feedstocks)

Other, please specify

Industrial Base Oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

201.94

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

201.94

Emission factor

0.0733

Unit

metric tons CO2 per GJ

Emissions factor source

IPCC Guidelines for National Greenhouse Gas Inventories Chapter 2: Stationary Combustion- Volume 2: Energy Intergovernmental Panel on Climate Change 2006, Table 1.2: Default net calorific values, Table 1.4: Default CO2 emission factors for combustion

Comment

Industrial base oil is consumed in cogeneration plant.

Fuels (excluding feedstocks)

Propane Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

26.76

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

26.76

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

2.86

Unit

metric tons CO2 per metric ton

Emissions factor source

American Petroleum Industry Compendium (2009) Table 3.8 Densities, Higher Heating Values and Carbon Contents for Various Fuels, Table 4.3. CO2 combustion emissions factor for common industry fuel types

Comment

Propane is consumed for welding processes.

Fuels (excluding feedstocks)

Methane

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

4.6

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

4.6

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

28

Unit

metric tons CO2 per metric ton

Emissions factor source

IPCC Fifth Assessment Report, 2014 (AR5)

Comment

Methane is consumed in Quality Assurance processes.

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	12,281.33	12,281.33	0	0
Heat	42,173.07	42,173.07	0	0
Steam	0	0	0	0
Cooling	21,831.27	21,831.27	0	0

C8.2e

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

Sourcing method

Unbundled energy attribute certificates, International REC Standard (I-RECs)

Low-carbon technology type

Hydropower

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

Turkey

MWh consumed accounted for at a zero emission factor

179,796.93

Comment

For the reporting period between 01.01.2020 to 31.12.2020, 100% of electricity has been purchased from hydropower renewable energy plant in Turkey, Menzelet HEPP for Arçelik HQ and production plants in Turkey. The redemption statements were produced for all Arçelik locations which are in reporting scope of CDP 2021 in line with International Renewable Energy Certificates (I-RECs) standard by the electricity supplier.

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

76,934

Metric numerator

tons

Metric denominator (intensity metric only)**% change from previous year**

14.3

Direction of change

Decreased

Please explain

Thanks to waste reduction projects performed in Arçelik's production plants in Turkey, the total waste amount generated from production activities was reduced by 14.3% in 2020 compared to 2019.

2019 Waste amount: 89,862 tons

2020 Waste amount: 76,934 tons

$(76,934 - 89,862) / 89,862 = -14.3\%$ (Decreased)

Description

Energy usage

Metric value

1,284,064

Metric numerator

GJ

Metric denominator (intensity metric only)**% change from previous year**

1.75

Direction of change

Decreased

Please explain

Thanks to energy efficiency projects performed in Arçelik's production plants, the energy consumption amount was reduced by 1.75% in 2020 compared to 2019.

2019 Energy Consumption: 1,306,876 GJ

2020 Energy Consumption: 1,284,064 GJ

$(1,284,064 - 1,306,876) / 1,306,876 = -1.75\%$ (Decreased)

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_2020.pdf

 Arcelik_GHG_Verification_Reports_2020.pdf

Page/ section reference

Arcelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6), I-REC Renewable Energy Declarations (Page: 7-20)

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_2020.pdf

Page/ section reference

1:Arçelik Carbon Footprint Verification Certificate(Page:1-4),CDP Verification Document(Page:5-6), I-REC Renewable Energy Declarations(Page:7-20)
2:100% of the electricity used in Turkey operations in 2020 was purchased from renewable sources. Market-based Scope-2 emissions were reported as zero because emission factor of renewable sources is taken as zero.
3:Scope 2 emissions have been reported under the "Indirect GHG emissions from imported energy"section in accordance with ISO 14064-1:2018.

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_2020.pdf

Page/ section reference

1:Arçelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6), I-REC Renewable Energy Declarations (Page:7-20)

2:100% of the electricity used in Arçelik's Turkey operations in 2020 was purchased from renewable sources. So, location-based Scope 2 emissions have been reported as zero.

3:Scope 2 emissions have been reported under the "Indirect GHG emissions from imported energy"section in accordance with ISO 14064-1:2018.

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

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_2020.pdf

Page/section reference

Arçelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6)

Please note that Scope 3 emissions from purchased goods and services are reported under the "Indirect greenhouse gas emissions from products used by the organization" section in accordance with ISO 14064-1:2018 Standard, and verified in accordance with ISO 14064-3. Scope 3 details can be found in CDP Verification Document (Page:5-6).

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Waste generated in operations

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_2020.pdf

Page/section reference

Arçelik Carbon Footprint Verification Certificate (Page:1-4),CDP Verification Document (Page:5-6)

Please note that Scope 3 emissions from waste generated in operations are reported under the "Indirect greenhouse gas emissions from other sources" section in accordance with ISO 14064-1:2018, and verified in accordance with ISO 14064-3. The total amount of indirect greenhouse gas emissions from other sources includes Scope 3 emissions from waste generated in operations. Scope 3 details are on Page5-6.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Business travel

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

 Arcelik_GHG_Verification_Reports_2020.pdf

Page/section reference

Arcelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6)

Please note that Scope 3 emissions from business travel are reported under the "Indirect greenhouse gas emissions from transportation" section in accordance with ISO 14064-1:2018 Standard, and verified in accordance with ISO 14064-3. The total amount of indirect greenhouse gas emissions from transportation includes Scope 3 emissions from business travel. Scope 3 details are on Page5-6.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Employee commuting

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

 Arcelik_GHG_Verification_Reports_2020.pdf

Page/section reference

Arcelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6)

Please note that Scope 3 emissions from employee commuting are reported under the "Indirect greenhouse gas emissions from transportation" section in accordance with ISO 14064-1:2018 Standard, and verified in accordance with ISO 14064-3. The total amount of indirect greenhouse gas emissions from transportation includes Scope 3 emissions from employee commuting. Scope 3 details are on Page5-6.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Downstream transportation and distribution

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_2020.pdf

Page/section reference

Arçelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6)

Please note that Scope 3 emissions from downstream transportation and distribution are reported under the "Indirect greenhouse gas emissions from transportation" section in accordance with ISO 14064-1:2018, and verified in accordance with ISO 14064-3. The total amount of indirect greenhouse gas emissions from transportation includes Scope 3 emissions from downstream transportation and distribution.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Use 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_2020.pdf

Page/section reference

Arçelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6)

Please note that Scope 3 emissions from purchased goods and services are reported under the "Indirect greenhouse gas emissions associated with the use of products from the organization" 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

Scope 3 category

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_2020.pdf

Page/section reference

Arçelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6)

Please note that Scope 3 emissions from end-of-life treatment of sold products are reported under the "Indirect greenhouse gas emissions from other sources" section in accordance with ISO 14064-1:2018 Standard, and verified in accordance with ISO 14064-3. The total amount of indirect greenhouse gas emissions from other sources includes Scope 3 emissions from end-of-life treatment of sold products.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3 (upstream)

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_2020.pdf

Page/section reference

Arçelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6)

This section has been filled for emissions from treatment of biological wastewater outside of our plants. These are reported under "Indirect greenhouse gas emissions from other sources" section in accordance with ISO 14064-1:2018, and verified in accordance with ISO 14064-3. The total amount of indirect greenhouse gas emissions from other sources includes Scope 3 emissions from wastewater treatment.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3 (downstream)

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_2020.pdf

Page/section reference

Arçelik Carbon Footprint Verification Certificate (Page:1-4), CDP Verification Document (Page:5-6)

This section has been filled for emissions from treatment of packaging of sold products. These are reported under "Indirect greenhouse gas emissions from other sources" section in accordance with ISO 14064-1:2018, and verified in accordance with ISO 14064-3. The total amount of indirect greenhouse gas emissions from other sources includes Scope 3 emissions from treatment of packaging of sold products.

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, energy efficiency projects' GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2020)". 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, energy efficiency projects' GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2020)". 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, energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2020)". 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, energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2020)". 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, energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2020)". 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, energy efficiency projects’ GHG performances are also submitted to independent verification organization with "Arçelik A.Ş. Greenhouse Gas Emissions Report (2020)". 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?

In Paris COP21, Turkey signed the Paris Agreement and submit its INDC 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.

This target has not been allocated to the sectors yet. And method of GHG reduction has not been identified yet. It is under progress. But it is anticipated that there will be carbon tax.

In this context, it is deduced that the targets or taxes will be related to energy efficiency projects and the possible use of renewable energy resources. Because of this reason renewable energy usage and energy efficiency investment requirements will need to be increased. Companies may need to buy electricity from renewable sources with higher prices. Energy efficiency projects and carbon credit purchasing needs will be increased.

To manage above-mentioned possible obligation, Arçelik has energy efficiency targets annually to increase the energy efficiency in production and decrease its Scope-1 and Scope-2 GHG emissions, also Arçelik 's science-based targets has been approved by Science-Based Targets Initiative (SBTi) to reduce its Scope-1 and Scope-2 GHG emissions by 30% and Scope-3 GHG emissions by 15% as of 2030, compared to 2018 baseline. Furthermore, Arçelik succeeded in becoming carbon-neutral in global manufacturing* for Scope 1 and Scope 2 in 2019 and 2020 **with its own carbon credits****. Arçelik commits to make an additional investment of USD 50 million in energy efficiency, green electricity purchases and renewable energy systems.

With energy efficiency projects in Arçelik Production Plants at last 11 years (2010-2020), we have saved nearly 960,000 GJ energy with 1,470 projects. Totally; 89,739 tCO_{2e} GHG emission has been reduced since 2010. Arçelik SC contributes those targets every year for increasing energy efficiency in production and using electricity produced by renewable energy sources (RES) to reduce GHG emissions. Arçelik, starting from 2012, has been using electricity generated from Renewable Energy Sources (RES). The supply rate of electricity generated from RES, which was realized approximately as 1% in 2012, 28% in 2013, 78% in 2014, and 82% in 2015, 88% in 2016, 77% in 2017, 75% in 2018, and was reached 100% as of 2019 and remained same in 2020.

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 CO_{2e} carbon is applied for investments higher than EUR 50,000 capital cost and 50 kW capacity to navigate the possible GHG regulations.

* Singer Refrigerator Plant and TV & AC Plant in Bangladesh acquired in 2019, Voltbek in India which started production in 2020, and Arçelik-LG A/C joint venture plant in Turkey are excluded from calculations.

** Through the "Carbon Financing Project for Energy Efficient Refrigerators" implemented in Turkey in 2013, it is received the right to 305,407 tons of carbon credit earned between 2013 and 2018. By putting on the market refrigerators that are more energy efficient than the average, Arçelik received carbon credits that have been verified by a third-party verification company in compliance with the Verified Carbon Standard (VCS). Arçelik used its own carbon credits to offset its direct (Scope 1) and indirect-energy (Scope 2) GHG emissions generated in global manufacturing plants in 2019 and 2020. Thus, Arçelik became carbon neutral in global manufacturing plants for Scope 1 and 2 in 2019 and 2020 fiscal years without purchasing any carbon offset credit, in accordance with the PAS 2060 carbon neutrality standard. In line with its carbon neutrality roadmap and 2030 targets.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit origination

Project type

Energy efficiency: households

Project identification

Through the Carbon Financing Project for Energy Efficient Refrigerators we implemented in Turkey in 2013, we received the right to 305,407 tons of carbon credit earned between 2013 and 2018. By putting on the market refrigerators that are more energy efficient than the average, Arçelik received carbon credits that have been verified by a third-party verification company in compliance with the Verified Carbon Standard (VCS). Since there is not any regulatory emission trading scheme in Turkey, project is initiated as voluntary offsetting project. The Project crediting period is 10 years (2013-2023) and the estimated average emission reductions resulting from this project is estimated around 1.8 million tCO₂e, totally (The estimation was based on the assumptions made in line with the CDM methodology). Thanks to this project, approximately 305,407 tons of CO₂e emissions reduction have been verified for 2013-2018. Based on approximate and non-verified calculations 285,000 tons of CO₂ originated only in 2020.

(Registry: APX; Project ID:1117) Project link:
<https://registry.terra.org/app/projectDetail/VCS/1117>

As it is mentioned in C11.1d, some of originated carbon credits from Carbon Financing Project for Energy Efficient Refrigerators, has been used to offset Arçelik's direct (Scope 1) and indirect-energy (Scope 2) GHG emissions generated in global manufacturing plants* in 2019 and 2020.

* Singer Refrigerator Plant and TV & AC Plant in Bangladesh acquired in 2019, Voltbek in India which started production in 2020, and Arçelik-LG A/C joint venture plant in Turkey are excluded from calculations.

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

285,000

Number of credits (metric tonnes CO2e): Risk adjusted volume

285,000

Credits cancelled

No

Purpose, e.g. compliance

Voluntary Offsetting

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

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. 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.

* 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.

** 2020 Average FX rates 1 EUR = 8.0141 TRY
30 EUR = 240.41 TRY

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

240.41

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 internal consultation and benchmark studies.

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 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 2020 page 65. In page 47, 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.

(Sustainability Report 2020 - Page 47 :

https://www.arcelikglobal.com/media/6347/sustainability_report_2020.pdf)

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

13

% total procurement spend (direct and indirect)

80

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

10.7

Rationale for the coverage of your engagement

In 2018, we initiated the in-house Supplier Sustainability Index Project to conduct supplier sustainability risk assessment. We extend this project further as Supplier Sustainability Data Monitoring and Development Project in collaboration with an independent, accredited audit firm. The assessment survey is sent to critical suppliers that are determined according to Kraljic Methodology. Risk levels of the critical suppliers are determined as high, medium, acceptable, good and excellent. Suppliers at "excellent" category are included in the awarding process and evaluated for the certification process which is an evaluation process to certify best performing suppliers. This process incentivizes them to report their climate-related data. We have approximately 2,000 (direct) sources in more than 50 countries. 259 (13% of total suppliers) of our suppliers make up 80% of our purchasing volume according to Kraljic Matrix. Based on the Kraljic Matrix, 8.8% of all suppliers are classed as critical, tier 1

suppliers. The number of payments made to critical and direct suppliers was EUR 1.3 billion in 2020, which represents 46% of total payments made. We analyzed the sustainability risks in our supply chain and assessed 175 suppliers in 2020 based on those risks. With supplier monitoring through a self-assessment questionnaire that includes qualitative and quantitative metrics via a data collection platform accessible by suppliers, we follow our suppliers' current and past three years sustainability performance. Up to now, 133 of our suppliers were evaluated. 1% of them were included in the High-Risk category and 7% in the Middle Risk. By applying this method, we calculated that 343,750 tons of CO₂e emissions have been generated from our suppliers which answered the questionnaire. However, this GHG value did not reported in C6.5 since it was not verified. Ratio of supplier-related Scope 3 emissions reported in total Scope 3 emissions in C6.5 is 10.7% (1,979,159 ton CO₂e / 18,363,993 ton CO₂e = 10.7%). 12 million kWh of energy was saved through 132 efficiency projects conducted with 52 suppliers in 2020. In 2020, we collected environmental data from 60 suppliers in scope our target. We commit to making sure that the ISO 14001 will be applied for approx. 400 suppliers making 90% of our purchasing volume by 2023. In 2020, 68.6% of all critical suppliers have ISO 14001.

Impact of engagement, including measures of success

Assessment comprises ESG questions including environmental reporting, environmental policy/management system/scope, compliance with legislation, measurement and monitoring (e.g. the energy consumption, GHG emission data), environmental voluntary activities. Each question asked to the supplier has a point and weight. The sustainability risks in the industry is taken into consideration while determining the weights. Risk levels of the suppliers are determined as high, medium, acceptable, good, and excellent. We collaborate with an independent accredited audit firm which reviews data and informs to Arçelik Sustainable Supply Chain Working Group periodically. In the 15 meetings conducted in 2020, the WG evaluated sustainability index levels for suppliers during previous periods, their participation status on the index, business ethics auditing plans and results, follow-up actions shared by risky suppliers, and sustainability training. Suppliers at excellent category are evaluated for the certification process. Success is measured through re-assessments and follow-up audits. We have approximately 2,000 (direct) sources, 259 of them make up 80% of our purchasing volume according to Kraljic Matrix. The number of payments made to critical and direct suppliers was EUR 1.3 billion in 2020, which represents 46% of total payments made. We analyzed the sustainability risks in our supply chain and assessed 175 suppliers in 2020 based on those risks. By applying this method, we calculated that 343,749.57 tCO₂e emissions were generated from our suppliers which answered the questionnaire. However, this GHG value did not reported in C6.5 since it was not verified. We engage with suppliers to work on energy efficiency projects. 12 million kWh of energy was saved through 132 efficiency projects conducted with 52 suppliers in 2020. By 2025, we aim to collect and monitor environmental data from approximately 400 suppliers making 90% of our purchasing volume, encourage them to set their own targets and publicly disclose their data. By 2023, we commit to make sure that the ISO 14001 certificate apply for approximately 400 suppliers making 90% of our purchasing volume. By achieving our targets, our suppliers will set targets and measure environmental performance metrics such as

water withdrawal, wastewater discharge, water risks. In 2020, 68.6% 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 development of sustainability performances of our suppliers.

C12.1b

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

Type of engagement

Education/information sharing

Details of engagement

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

% of customers by number

100

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

85

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 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 of "Things to do to save energy". On our website, and on the product labels, customers can reach the energy consumption information of our products.

Since 85% of Scope 3 emissions reported in C6.5 comes from use of sold products during their life time, "% of customer-related Scope 3 emissions as reported in C6.5" has been answered as 85%.

Impact of engagement, including measures of success

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 have been created.

Arçelik also supports national and international activities for combating climate change. Arçelik participates in Global Climate Conferences and shares its best practices in the panels since 2011. Arçelik attends meetings organized by the Ministry for defining Turkey's climate strategy. In addition, Arçelik's CEO is a commissioner 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. Alos, Arçelik's Quality, Sustainability and Corporate Affairs Director is the president of TUSIAD – Environment and Climate Change Working Group.

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 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 regards to restrictions such as time and resources.

C12.3

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

- Direct engagement with policy makers
- Trade associations
- Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Energy efficiency	Support	<p>1) 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. 2) Arçelik participates and gives 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). 3) Arçelik has a close relationship with relevant ministry directorates in Turkey and works together on the transposition of EU regulations into Turkish law. Arçelik has taken active part in the consultation phase of Turkish energy labelling and eco-design regulations for product groups that are published in parallel with EU versions.</p>	<p>1) As a result of EVÜdP project, EU ecodesign and energy labelling regulations for washing machine, dishwasher, oven, hob, hood, refrigerator, freezer, air conditioners, dryer and television implemented to Turkey in 2011 in parallel with EU laws. Under the EU harmonization efforts, non-energy efficient refrigerator, washing machine and dishwasher 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 Science, Industry and Technology Ministry and the producers have been created. 2) In line with the opinions transmitted via APPLiA lobbied for a stable new energy labelling scheme to be included in the draft regulation. Finally, 10-year stability is guaranteed in the new framework regulation that is adopted in June 2017. The new energy labelling regulation was published in August 2017 and it is foreseen that it will enter into force on 1 March 2021 for refrigerators, washing machines, dishwashers, TVs</p>

			<p>and within 6 years after publication of framework regulation for other products.</p> <p>3) For the purpose of dissemination of highly energy efficient products, "industry opinion" for incentives were provided to the Ministry of Finance. Arçelik give important contribution to these proposals. 4) In February 2017, extra tax (other than VAT) on durable goods was removed by the government. It was not applied until September 2017 as declared by the Ministry.</p>
<p>Other, please specify</p> <p>Climate change</p>	Support	<p>1) Arçelik took part in the working group which has been established by the Ministry of Environment and Urbanization&UNIDO. The group is working on the technical specifications of determining, collecting and disposal of the Ozone Depletion Substances that are banned. 2) Arçelik became a member of Climate Platform of Turkey which is established as an independent non-profit initiative by REC Turkey and TÜSİAD). 3) Arçelik gave comments on draft Regulation on Turkish Monitoring and Reporting, in 2012. 4) Arçelik 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. 5) Arçelik's former CEO represented Turkey as "President of Turkey Climate Change Group of Leaders " and presented opinions of private sector at "Towards Rio +20, Business Leaders Build Change" panel in COP17. Arçelik also actively participated in work groups at the Ministry of Environment and Urbanization ahead of the WCC realized in Lima in 2014. Arçelik participated in COPs and represented Turkey. Arçelik CEO</p>	<p>1) In Turkey, Arçelik was the first household appliances manufacturer to produce refrigerators without ozone-depleting CFC gases in 1995, much earlier than 2006, which was the deadline set for Turkey under the Montreal Protocol. Arçelik contributed the national regulation in this area and lead to its sector for this transition. 2-5-6) Because of the responsibility being Climate Platform Leader of Turkey, Arçelik lead its sector to combat climate change and shared the sector's view to the world in World Climate Summit. 3-4) Arçelik has given its comments to Ministry for Turkish MRV Regulation on the importance of specifying Turkish grid emission factor and specifying the tiers. 8) Arçelik has cooperate and communicate with Ministry</p>

		<p>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 "Responsible corporate engagement policy" of "Road to Paris 2015 Project". Arçelik's Scope 1-2-3 reduction targets have been approved by Science Based Targets initiative. 6) Arçelik considers climate change as an important risk for world's sustainability, maintains its support to local and international projects executed by business world both in Turkey and abroad. In this scope, Arçelik signed "The 20C Challenge Communiqué" prepared by Corporate Leaders Network (CLN). 7) In 2020, Arçelik was named, for the second year in a row, the Industry Leader in the Dow Jones Sustainability Index and located Istanbul Stock Exchange Sustainability Index (BIST SI) which also include climate change performance indicators. 8) WEEEs such as refrigerator, air conditioner etc. may contain ODS which have high GWP. The gases must be properly extracted and treated in an environmental-friendly way. Arçelik made a joint study with the Ministry of Environment and Urbanization to publish the "WEEE Regulation" in Turkey.</p>	<p>for creating and implementing of Turkish WEEE Regulation. Arçelik contributed to WEEE Management System in Turkey.</p>
Energy efficiency	Support	<p>1) Arçelik has a close relationship with all relevant ministry departments and work together on the preliminary phase of transposition of EU regulations into Turkish law. Arçelik took active part in the consultation phase of Turkish energy labelling and ecodesign directives, which are published in official journal, dated 22 June 2012. 2) 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 product and</p>	<p>The aim is to have Turkish ecodesign and energy labelling regulations entered into force simultaneously with EU. Arçelik continuously provide its comments to relevant governmental departments and participates in the meetings in the scope of public-private dialogues.</p>

		<p>production technologies are developed. Projects are carried out also under European Union 7th Framework Program. 3) Arçelik also has a close relationship with Ministry of Industry and Technology and work together on energy efficiency and energy regulations in industrial electric motors.</p>	
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C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

TUSIAD – Environment and Climate Change Working Group

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

This working group is established for supporting the development of environmental policies in Turkey and the development of regulations in order to provide economic growth in parallel with the sustainability of natural resources. 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, which TÜSİAD 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.

How have you influenced, or are you attempting to influence their position?

Arçelik's Quality, Sustainability and Corporate Affairs Director is the president of this working group.

Trade association

TOBB – Consumer Durable Goods Council Environmental Sub-Working Group

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

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.

How have you influenced, or are you attempting to influence their position?

Arçelik's Environment Manager is a member of this sub-working group.

Trade association

World Business Council for Sustainable Development

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Member of SOS 1,5, Natural Climate Solutions, Circular Plastics & Packaging, Factor 10 Circular Metrics, CFO Network working groups

How have you influenced, or are you attempting to influence their position?

Arçelik joins the projects in these groups to take comprehensive, reliable and ambitious guidance on how to lead the low carbon transition.

C12.3e

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

Arçelik conducts cooperation activities with universities on climate change subject:

- Arçelik is a member of WBCSD and also Turkish Sustainable Development Association (SKD) which is a direct member of WBCSD. Also, Arçelik is in collaboration with UNEP for U4E project.
- Arçelik is a member of Sustainable Process Industry Through Resource and Energy Efficiency (A.SPIRE).
- Arçelik has made a commitment to "Responsible corporate engagement policy" program in scope of "Road to Paris 2015 Project" which is a global project related to combat climate change launched by CDP.
- Arçelik signed 'The Principles for Dialogue on Climate Action' within the scope of the event.
- Arçelik has signed «Paris Pledge for Action» sent by Cambridge University Institute for Sustainability Leadership.
- 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 have made a commitment to reduce our absolute Scope 1 and 2 GHG emissions by 30% and our absolute Scope 3 emissions from the use of our sold products by 15% by 2030 from a 2018 base year. To achieve our goals and retain our position as a leader, we will continue investing in energy efficiency, green electricity purchases and renewable energy systems.

- Developing climate-friendly products that use less resources and that are accessible to all in line with the 2030 United Nations Sustainable Development Goals, Arçelik marks a milestone in its sustainability efforts and succeeded in becoming carbon-neutral in global manufacturing* for Scope 1 and Scope 2 in 2019 and 2020 with its own carbon credits and took another important step in the fight against climate crisis. Thus, we became carbon neutral in global manufacturing plants* for Scope 1 and 2 in 2019 and 2020 fiscal years without purchasing any carbon offset credit, in accordance with the PAS 2060 carbon neutrality standard. (**Singer Plants in Bangladesh and joint ventures are excluded*)
- Energy Productivity 100 (EP100) which is led by the Climate Group, brings together a growing group of energy-smart companies improving their energy productivity to lower their GHG emissions. As Arçelik, we have applied to become a member of EP100 and committed to double our energy productivity by 2030, compared to 2010.
- 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 production process by 45% per product compared to 2015 base year.
- Being one of the pilot providers of ECOFACT project (a H2020 projects) with our Arctic Washing Machine Plant in Ulmi, Romania, we are working to optimize energy and the use of other natural resources through data collection from various process equipment and auxiliary facilities via several sensors we have implemented.
- We Became Signatory of the Business Plastic Initiative (IPG). IPG is a collaboration founded by Global Compact Turkey, the Business Council for Sustainable Development (BCSD) Turkey, and the Turkish Industry and Business Association (TÜSİAD) in 2019. It brings together the stakeholders of the entire plastic value chain to make commitments on taking concrete actions to minimize the production and consumption of plastics.
- Arçelik CEO Hakan Bulgurlu is a high commissioner on the Carbon Pricing Leadership Coalition under the auspices of the World Bank, and has previously spoken on the effective carbon pricing strategies that will enable the transition to a carbon-free global economy.
- Arçelik conducts cooperation activities with universities on climate change subject:
 - Sustainable Energy Efficient Project-The Union of Chambers and Commodity Exchanges of Turkey (TOBB) Economy and Technology University Mechanical Engineering, Degree Thesis Study,
 - Life Cycle Engineering-Istanbul Technical University Mechanical Engineering, Degree Thesis Study
 - Project for optimization of energy consumption at cooling system of plastic injection machines-Yıldız Technical University (YTU) Mechanical Engineering, MSc Thesis Study.
 - Water Recycling, Minimization and Integrated Water Management Project in Arçelik Cooking Appliances Plant-Istanbul Technical University, Environmental Engineering, MSc & PhD. Thesis Study.
 - Environmental impacts of a printed circuit board manufacturing plant via a streamlined approach – Istanbul Technical University Environmental Engineering, MSc Thesis Study
- 12 million kWh of energy was saved through 132 efficiency projects conducted with 52 suppliers in 2020.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

All business strategies and targets are being studied and implemented by Climate Change Coordination WG (CCC WG) which consists of Sustainability, Energy and Environment Managers, Environment and Energy Specialists and production managers. This Group is responsible to integrate climate change efforts and ensures that all efforts comply to Arçelik's climate change strategy, policy and legal regulations. This Group collects and reports the information to influence the strategy. The Group meets quarterly. CCC WG identifies the company's climate change related risks and opportunities at the asset level and reports to Sustainability Council.

Arçelik has an integrated ISO 50001 & 14001 & 14064-1 Management Systems. Energy managers of the plants reviews the projects that provides GHG mitigation and energy efficiency projects quarterly and reports the results to directors and CCC WG annually. CCC WG controls the compliance of the results with the climate change policy and strategy. The communication and coordination are handled by CCC WG.

Arçelik engages with policy makers on mitigation and adaptation as well as environmental legislative issues using a wide variety of communication channels. CCC WG representatives are also the member of T.R. Environment and Urbanization Ministry's technical committees (TC) on climate change (Climate Change Awareness, Mitigation TC etc.). Energy and Environment Departments represent Arçelik in several NGOs in Turkey (TUSIAD, ISO, TOBB Durable Goods Council) and mainly in APPLiA for EU activities.

Arçelik's CEO is a commissioner of the High-Level Commission on Carbon Pricing and Competitiveness.

A member of the Arçelik Board of Directors is appointed to report to the Board of Directors on Climate Change Strategy and Sustainability issues. Quarterly reports are presented to the Board of Directors.

Arçelik is a member of WBCSD and also Turkish Sustainable Development Association (SKD) which is a direct member of WBCSD. Also, Arçelik is in collaboration with UNEP for U4E project.

These organizations and activities exist to ensure that all engagement activities are in line with Arçelik's climate change policy and strategy.

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_2020.pdf

Page/Section reference

1-150

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify
Climate-related awards (CDP scores etc.)

Comment

Governance, strategy, risk management, emission figures, emission targets, 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

 Arcelik_Sustainability_Report_2020.pdf

Page/Section reference

1-222

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, other metrics such as water consumption, energy consumption, energy efficiency projects, climate-related scenario analysis, low-carbon products, climate-related awards are shared publicly in Arçelik's sustainability reports every year.

C15. Signoff**C-FI**

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

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

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

Submit your response

In which language are you submitting your response?

Please confirm how your response should be handled by CDP

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

Please confirm below