ŞİŞECAM

Şişecam TSRS-Compliant Sustainability Report 2024

Care for Next

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1. Objective & Scope

Company's Approach to the Implementation of TSRS 1 and TSRS 2 Standards

The Türkiye Sustainability Reporting Standards (TSRS), which are based on IFRS S1 and IFRS S2 standards developed by the International Sustainability Standards Board (ISSB), entered into force in Türkiye as of January 1, 2024. These standards aim to enhance corporate transparency in the disclosure of sustainability-related financial information, strengthen investor confidence, and promote the provision of more meaningful information for decision-makers.

TSRS 1: The General Requirements for the Disclosure of Sustainability-related Financial Information defines the overarching principles and framework regarding how entities should present disclosures related to sustainability-related risks and opportunities. This standard requires the disclosure of comprehensive information on governance structure, strategic approach, risk management practices, and metrics and targets. TSRS 1 has been designed to be used in conjunction with TSRS 2, which specifically focuses on climate-related disclosures. Within this framework, entities are expected to disclose information on the potential impacts of climate-related risks and opportunities on their future cash flows, financial position, and financial performance.

Türkiye Şişe ve Cam Fabrikaları A.Ş., a publicly traded global joint stock company operating in Türkiye and 14 countries across four continents—including Europe, Asia, Africa, and North America—is obligated to disclose information in accordance with the requirements of TSRS 1 and TSRS 2. In fulfilling these obligations, Şişecam has prepared its first declaration as of 2024, in compliance with TSRS regulations, with a particular focus on climate-related disclosures. This first report includes only the disclosures on climate-related risks and opportunities, and their financial impacts in line with the requirements of TSRS 2. Şişecam aims to present both the general disclosure requirements under TSRS 1 and the climate-related disclosures under TSRS 2 in an integrated framework aligned with its corporate strategy.

Reporting Scope

The TSRS 1 and TSRS 2 Report ("TSRS-Compliant Sustainability Report") covers the Group's climate-related financial disclosures for the financial year ending December 31, 2024, of Türkiye Şişe ve Cam Fabrikaları A.Ş. and its subsidiaries. Prepared in accordance with TSRS standards, this report should be evaluated in conjunction with the Şişecam 2024 Annual Report and the Şişecam 2024 Sustainability Report.

2. General Requirements

2. General Requirements

2.1. Reporting Entity

2.1.1. Parent Company

Türkiye Şişe ve Cam Fabrikaları A.Ş. (the "Company") and its subsidiaries shall be collectively referred to as the "Group." As of December 31, 2024, the Group consists of 56 subsidiaries, 1 joint venture, 4 associates, and 1 joint operation. For management reporting purposes, the Group is organized into seven business segments: architectural glass, industrial glass (automotive, white goods, and glass fiber), glassware, glass packaging, energy, chemicals, and other operations. Other operations include imports and exports activities; collection, separation, processing, recycling, and recovery of glass cullet; production and sales of cast AZS refractory blocks for glass production; holding company operations and insurance brokerage services.

2.1.2. Corporate Profile

The Group was established in 1935 under the leadership of Türkiye Iş Bankası A.Ş., with the aim of ensuring the development of the glass industry in Türkiye. The industrialization policies during the early years of the Republic of Türkiye significantly influenced the Group's founding. Over time, the Group has expanded its operations in the glass and chemicals sectors, evolving into a global organization.

The Group operates integrated production across all core areas of glass production and possesses a high global production capacity in glassware and chromium compounds. Positioned among the world's top five producers of flat glass and glass packaging, the Group is also among the largest producers of soda ash production.

The Group's production facilities are located in a total of 14 countries, including Türkiye, Germany, Italy, Bulgaria, Romania, Slovakia, Hungary, Bosnia and Herzegovina, Russia, Georgia, Ukraine, Egypt, India, and the United States. The Group's main areas of activity include flat glass, glass packaging, glassware, chemicals, automotive glass, glass fiber, energy, mining, and recycling.

2.1.3. Subsidiaries

Business Units

For architectural glass, production operations are carried out at plants in Kırklareli, Mersin, Bursa, and Ankara provinces in Türkiye; as well as at Trakya Glass Bulgaria EAD in Bulgaria, Sisecam Flat Glass Italy S.R.L. and Sisecam Flat Glass South Italy S.R.L. in Italy, Trakya Glass Rus AO in Russia, Sisecam Flat Glass India Pvt. Limited in India, and Saint Gobain Glass Egypt S.A.E. in Egypt. The investment phase for the Tarsus plant is still ongoing. The Group has a total installed capacity of 4.3 million tons per year in flat and frosted glass production and supplies materials to the construction, furniture, automotive, solar energy, and white goods sectors.

For industrial glass, the Group manufactures automotive and glass fiber products. Production operations are carried out at Şişecam Otomotiv A.Ş. Lüleburgaz Auto Glass Plant and Şişecam Elyaf Sanayii A.Ş. Balıkesir Plant in Türkiye; as well as at Sisecam Automotive Bulgaria EAD in Bulgaria, Sisecam Automotive Germany GmbH and Richard Fritz Prototype + Spare Parts GmbH in Germany, Sisecam Automotive Hungary Kft in Hungary, Sisecam Automotive Slovakia S.R.O. in Slovakia, Sisecam Automotive Rus JSC in Russia, and Sisecam Automotive Romania SA in Romania. This segment serves the automotive industry and automotive replacement glass (ARG), wind turbine blades, maritime, thermoset and thermoplastic applications, furniture, glass reinforced plastic pipe, industrial applications, construction, insulation, composite industry, and infrastructure sectors.

For glassware production, the Group operates through its plants in Kırklareli, Eskişehir, and Denizli in Türkiye, as well as Paşabahçe Bulgaria EAD in Bulgaria, OOO Posuda in Russia, and Paşabahçe Egypt Glass Manufacturing S.A.E. in Egypt. With an installed capacity of 533,000 tons per year, the Group also engages in retail sales through 47 stores in Türkiye, along with one franchise store and one online store internationally.

For glass packaging, the Group operates manufacturing plants in Mersin, Yenişehir, and Eskişehir in Türkiye; OOO Ruscam Glass Packaging Holding (Ufa, Kirishi, Pokrovsky, Kuban, Gorokhovets) in Russia; JSC Mina in Georgia; and Merefa Glass Company Ltd in Ukraine. At the production facilities, glass packaging in various volumes and colors is produced for the food, beverage, pharmaceutical, and cosmetics sectors. The investment phase for the Sisecam Glass Packaging Hungary Kft plant in Hungary is still ongoing. The total installed capacity is 3.3 million tons per year.

For the chemicals segment, the Group produces soda derivatives and chromium compounds, operating through its plant in Mersin, Türkiye, as well as Solvay Sodi AD in Bulgaria, Sisecam Soda Lukavac d.o.o. in Bosnia and Herzegovina, Cromital S.p.A. in Italy, and Sisecam Chemicals Wyoming LLC in the United States. The investment processes for Pacific Soda LLC and Stockton Soda Ash Port LLC plants in the United States are ongoing. The Group's installed capacity amounts to 5 million tons per year for soda ash and 129,000 tons per year for Basic Chromium Sulfate (BCS) products.

In the energy field, electricity production is carried out through the Mersin Cogeneration Plant and the Trakya Regional Plant in Türkiye, with a total installed capacity of 155 MW, and electricity and natural gas trading operations are also ongoing.

Other Business Units

In addition to its core activities in the glass industry, the Group expands its value chain through its subsidiaries operating in different areas. In the mining sector, raw materials such as silica sand, limestone, dolomite, feldspar, and kaolin are produced at its facilities in Türkiye, Bosnia and Herzegovina, and Egypt, supplying the glass, glass fiber, ceramics, chemicals, building insulation, and metallurgy industries.

Operating in the packaging industry, Camiş Ambalaj produces paper and cardboard packaging for glass products, with an annual production capacity of 63 million square meters.

The Oxyvit subsidiary produces Vitamin K3 derivatives and sodium metabisulfite for the animal feed and chemical sectors.

Şişecam Sigorta provides agency services in all insurance branches except private pension (BES) and life insurance, offering solutions to Group companies, dealers, subcontractors, and individual customers.

Established for the recovery of glass cullet, Şişecam Çevre Sistemleri operates at its Eskişehir and Yenişehir plants, contributes to the production processes of glass packaging and glassware.

REFEL S.p.A., located in Italy, produces high-temperature resistant refractory products used in glass production furnaces and plays a critical role in the production of flat glass, glass packaging, and glassware with an annual capacity of 6,000 tons.

2.2. Reporting Period and Location of Disclosures

The disclosures within the scope of TSRS 1 and TSRS 2 have been prepared in accordance with the Türkiye Sustainability Reporting Standards issued by the Public Oversight, Accounting and Auditing Standards Authority (KGK), which came into effect for reporting periods beginning on or after January 1, 2024. These disclosures aim to provide financially relevant information to the public regarding significant climate-related risks and opportunities for the 2024 financial year.

The disclosures included in the report should be evaluated in conjunction with the Group's general purpose financial statements for the 2024 financial year. The disclosures have been prepared in a manner that is consistent and integrated with the aforementioned financial statements.

2.3. Reporting Scope

This report, prepared for the period January 1 – December 31, 2024, has been prepared based on the same reporting scope and period data as the Group's consolidated financial statements dated December 31, 2024. No transactions, events, or circumstances requiring disclosure in this sustainability report have occurred between the end of the reporting period and the date this report was approved for publication.

2.4. Fair Presentation

The information presented in this report covers the Group's climate-related risks and opportunities for the 2024 financial year. The disclosures have been prepared comprehensively, objectively, and fairly to support the decision-making processes of users of general-purpose financial reports. The information has been presented based on the principles of clarity, consistency, comparability, and reasonable assumptions based on reliable sources have been used in forward-looking estimates. The relationships between the risks and opportunities and their potential impacts on the Group's cash flows, access to financing, and cost of capital have been disclosed.

The report has been prepared in accordance with TSRS 1 and TSRS 2 standards, and where deemed necessary, the principle of fair presentation has been supported by additional information. In addition, the potential impacts of disclosing commercially sensitive information regarding opportunities on the Group's competitive advantage have also been considered. The disclosures have been presented in a manner that is consistent and integrated with the financial statements.

2.5. Connected Information

To ensure consistency among the various reports published by the Group, the climate-related financial disclosures presented in this report are based on the same data sets and assumptions as those in the financial statements for the 2024 financial year. Accordingly, to ensure consistency of climate-related data with financial information, for the accounting policies used in the preparation of the financial statements, implementation methods, estimates, and the presentation currency, (Turkish Lira - TL) has been taken as a basis.

2.6. Materiality

The identification, regular review, and revision of sustainability priorities (i.e., material topics) when necessary is of strategic importance to the Group. Within this framework, a comprehensive

materiality analysis was conducted in 2021. A broad universe of approximately 200 topics was created by taking into account global best practices, sectoral trends, criteria of rating agencies, previous sustainability projects, and the Group's corporate strategy.

These topics have been evaluated through the materiality approach, considering both the potential risks and opportunities faced by the Group as well as their environmental and social impacts. During the evaluation process, the opinions of approximately 400 employees working across 14 countries where the Group operates were collected through one-on-one interviews, surveys, and workshops. As a result of the analysis, 11 material topics have been identified.

Financial Materiality

The Group continues its investments at both local and global levels and evaluates its consolidated financial statements primarily based on net revenue. However, it is observed that changes in revenue also have parallel effects on subsequent financial statement items, such as EBITDA and gross profit. For this reason, the financial materiality threshold at the Group level has been defined as 1% of revenue. As a result of the materiality analysis, the topics with the highest priority in terms of their potential to create risks and opportunities have been identified as "Climate Change," "Water Use," and "Circular Production." Among these topics, "Climate Change" ranks highest in terms of financial materiality.

Climate Change

Water Use

Circular Production

2.7. Sources of Guidance

The Group's disclosures related to climate change have been prepared in accordance with TSRS 1 and TSRS 2 standards. Since the TSRS standards for non-climate sustainability topics have not yet been published, disclosures in these areas are based on the sector-specific guidelines of the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative's (GRI) 2021 Universal Standards.

2.8. Statement of Compliance

The Group has prepared its sustainability-related financial disclosures in full compliance with TSRS 1 and TSRS 2 standards. The accounting policies have been consistently applied throughout the year and aligned with data from previous periods. The disclosed data has been consolidated in accordance with the principles used in the financial statements, and the same principles have been adhered to in sustainability reporting.

The Group is committed to the continuous improvement of its reporting processes to enhance the quality of climate-related financial disclosures. In future periods, the Group will continue its efforts to strengthen compliance with the TSRS standards and further advance its disclosures.

2.9. Judgements, Uncertainties, and Errors

In preparing its climate-related financial disclosures, the Group has exercised judgements that could reasonably affect the identification of risks and opportunities, the implementation of relevant standards and guidance sources, the selection of material information, and the comprehensive assessment of all relevant risks across the value chain. This approach supports the integrity of the disclosures and compliance with the principle of fair presentation.

The data presented in this report has been obtained from the Group's corporate sources and independent data providers whose reliability is widely recognized. Some information may include approximate values within a certain margin of error, as it is based on measurement and estimation processes. The Group aims to ensure the highest level of accuracy, integrity, and reliability for all information provided.

2.10. Statement of Compliance and Exemptions

As of the relevant reporting period, the Group has benefited from the transitional provisions for the first reporting year within the scope of compliance with the Türkiye Sustainability Reporting Standards (TSRS). Accordingly, no comparative information for previous periods has been provided. In addition, disclosures required under the TSRS 1 standard have been limited exclusively to climate-related risks and opportunities, and these disclosures have been presented in accordance with the TSRS 2 standard.

3. Governance

3. Governance

3.1. Sustainability Governance

Recent global developments clearly demonstrate the need for an effective and holistic risk management approach in environmental, social, and governance (ESG) matters. These risks have become strategic factors that must be addressed not only for their operational impacts but also in consideration of stakeholder expectations and social sensitivities.

With this awareness, the Group has implemented a robust governance approach focused on sustainable growth under the leadership of its Board of Directors. In this context, the CareforNext Sustainability Strategy, developed in alignment with the United Nations Sustainable Development Goals (SDGs), has been structured to be adopted and implemented across all levels and functional areas of the organization. Through this structure, the integration of the sustainability strategy into the corporate culture is ensured, and the proactive management of ESG risks in alignment with the Group's long-term value creation goal is made possible.

At the Group, sustainability governance is overseen by the Board of Directors, which is the highest decision-making body. The regular review, approval, and supervision of sustainability and climate strategies fall under the responsibility of the Chairperson of the Board. The Chairperson of the Board regularly monitors progress made in line with the climate commitments set in accordance with the Group's vision of becoming carbon neutral by 2050. This strategic approach is clearly and explicitly defined within the corporate structure through the Annual Strategic Plans approved by the Board of Directors.

The Board of Directors Sustainability Committee, operating under the leadership of the Chairperson of the Board, fully embraces the CareforNext Sustainability Strategy and related efforts, defining the relevant policies and approaches. The Committee is responsible for the development of sustainability and climate policies, the identification of strategic trends, the assessment of risks and opportunities, as the coordination and monitoring of efforts towards established targets. Within this scope, the Committee is responsible for defining sustainability approaches and standards across the Group; developing ESG policies in line with material topics, risks, and opportunities; ensuring the definition and public disclosure of sustainability targets; supporting integration across the Group by monitoring sustainability efforts and promoting project development; approving and monitoring performance targets in the sustainability roadmap and practices; and reporting to the Board of Directors through annual reports within the prescribed timelines.

The Sustainability Executive Committee, chaired by the CEO and coordinated by the Chief Strategy Officer, convenes to ensure the effectiveness of the sustainability and climate governance structure at the operational level. The Sustainability Executive Committee, composed of Executive Committee members, is responsible for developing the sustainability and climate vision and strategy; identifying material topics; maintaining communication with internal and external stakeholders; and monitoring progress and performance in line with the targets of the sustainability working groups.

The Committee also develops the Group's climate change adaptation strategy and ensures its integration across all business units. The Committee sets climate-related targets and key performance metrics, disseminates them to relevant units, regularly reviews and monitors these metrics, and identifies necessary actions by assessing climate-related risks and opportunities across product groups and production locations.

The activities and guidance of the Sustainability Executive Committee are regularly reported to the Board of Directors Sustainability Committee through the Sustainability Directorate, thereby helping shape the strategic sustainability agenda.

3.2. Working Groups and Support Structures

Sustainability Working Groups

The Sustainability Working Groups, established within the Group in 2022, operate under the Sustainability Executive Committee in a multidisciplinary structure with the participation of employees from various departments. These working groups carry out their activities under the three main pillars of the CareforNext Strategy—Protect the Planet, Empower Society, and Transform Life—based on the Group's corporate sustainability approach.

The working groups identify needs and areas for development, develop concrete actions, and regularly report the resulting outputs to the Sustainability Executive Committee through the Sustainability Directorate to achieve the defined sustainability targets. This enables the sustainability vision defined at the strategic level to be implemented throughout all levels of the organization.

Protect the Planet Working Group

The Protect the Planet Working Group focuses on environmental issues and develops strategic approaches in critical areas such as climate change, water management, and circular production. The working group aims to implement impactful practices in these areas, which are among the globally prioritized environmental issues.

The core responsibilities of the working group include supporting the Group's strategies on climate change and water efficiency, accelerating the transition to renewable energy sources, and developing projects to reduce greenhouse gas emissions. It directly contributes to the achievement of Group's climate targets by coordinating internal activities on energy efficiency, renewable energy, and use of cullet. In addition, the working group is also responsible for conducting technical activities related to material environmental issues, coordinating project designs, and shaping these projects in line with best practices and technological developments.

The working group also closely monitors technological innovations, transformation projects, and investment plans to ensure that all efforts progress in full alignment with the Group's overall climate and sustainability goals.

Sustainability Directorate

The Sustainability Directorate, reporting to the Chief Strategy Officer, is responsible for analyzing the risks and opportunities related to the Group's priority sustainability issues. Scenario analysis studies on climate risks and opportunities are conducted under the coordination of the Sustainability Directorate, with contributions from relevant internal teams. The department also monitors customer expectations, systematically analyzes them, and communicates the findings to relevant business units, thereby contributing to the consistent implementation of the sustainability approach across the organization.

Environmental Sustainability Department

The Environmental Sustainability Department, reporting to the Sustainability Directorate, leads scenario and modeling studies related to circularity, energy, and climate change, provides technical guidance for these processes. The department also closely monitors regulations on environmental sustainability regulations, audits compliance with relevant regulations, and evaluates them from a risk and opportunity perspective to raise corporate awareness. It contributes to the effective corporate-level management of environmental responsibilities by sharing the analyses and information obtained with the relevant functions.

3.2.1. Responsibilities of Senior Management

Key roles delegated to executives in support of the Board of Directors' oversight

CEO

The CEO is the highest-ranking executive responsible for overseeing all activities related to climate change. The CEO chairs the Sustainability Executive Committee and ensures the integration of the CareforNext Sustainability Strategy into operational processes. Within this scope, the CEO leads the processes for managing risks arising from climate change and assessing emerging opportunities. Climate-related projects and investments are implemented with the approval of the CEO, thereby ensuring the effective allocation of necessary resources to achieve strategic targets. Additionally, decisions made by the Sustainability Executive Committee, chaired by the CEO, are submitted to the Board of Directors Sustainability Committee via the Sustainability Directorate. This ensures that developments related to the implementation of the climate strategy are regularly shared at the top management level. The CEO oversees data-driven decision-making processes to ensure the effective implementation of the Group's climate change strategy and guarantees that decisions are informed by accurate and up-to-date information.

Chief Strategy Officer

The Chief Strategy Officer is responsible for the integrated management of the Group's climate change strategy in alignment with the overall corporate strategy. The Chief Strategy Officer positions sustainability as a core element of the Group's short-, medium- and long-term plans and coordinates the formulation and implementation of these strategies. Thus, climate-related targets progress in alignment with the Group's business plans and growth objectives.

The Chief Strategy Officer ensures the setting of climate-focused targets, including emission reduction, enhanced energy efficiency, and broader adoption of renewable energy sources. Progress toward achieving these targets is regularly monitored, ensuring continuous development in line with the Group's sustainability roadmap. In addition, the Chief Strategy Officer's responsibilities include identifying climate-related risks and opportunities, as well as managing them effectively. Within this scope, both threats such as regulatory changes and physical risks and opportunities such as innovations in sustainable products and resource efficiency are evaluated.

The Chief Strategy Officer, reporting directly to the CEO, ensures a regular flow of information regarding the status of climate-related initiatives and their integration into the overall corporate strategy. These regular reporting efforts both strengthen the

accountability mechanism and enable senior management to closely monitor the Group's progress in combating climate change.

3.2.2. Board of Directors' Oversight and Supporting Controls and Procedures

The Board of Directors Sustainability Committee and Sustainability Executive Committee hold regular quarterly meetings to monitor and provide feedback on the activities of the working groups. In addition, sustainability-related issues and developments are reported monthly to the Executive Committee by the Chief Strategy Officer.

Regular risk analyses conducted by the Sustainability Directorate are shared with the Executive Committee, the Board of Directors Sustainability Committee, and the Sustainability Executive Committee. Actions to be taken regarding these risks are determined by the Sustainability Executive Committee. These actions are integrated into investment plans within the scope of the Annual Strategic Plan process and reflected in the targets of the relevant departments. The coordination and monitoring of the target-setting process are carried out in cooperation with the Strategy Monitoring Directorate and the Sustainability Directorate, within the framework of the Corporate Performance Management Process.

Risk Management and Internal Audit Framework

The Group effectively utilizes two fundamental components of corporate governance—the risk management and internal audit departments—to regularly review its organizational structure and processes. Risk management activities are conducted under the Early Detection of Risk Committee, while internal audit activities are conducted under the Audit Committee. Both committees are structured as sub-committees reporting to the Board of Directors, and the outcomes of their regular meetings are reported directly to the Board.

The Risk Management Department operates under the Board of Directors and is responsible for assessing and reporting the risks to which the Group is exposed.

The Internal Audit Department operates under the Board of Directors and conducts audits of the Group's business processes, including those related to sustainability and climate change, through a risk-based approach.

Sustainability Management Procedure and Process Flow

The Group's sustainability management is carried out through four main workflows, within the framework of a defined procedure:

- Development of the Sustainability Strategy
- Governance of the Sustainability Strategy
- Implementation of the Sustainability Strategy
- Sustainability Data Management and Reporting

Strategic Monitoring and Continuous Improvement

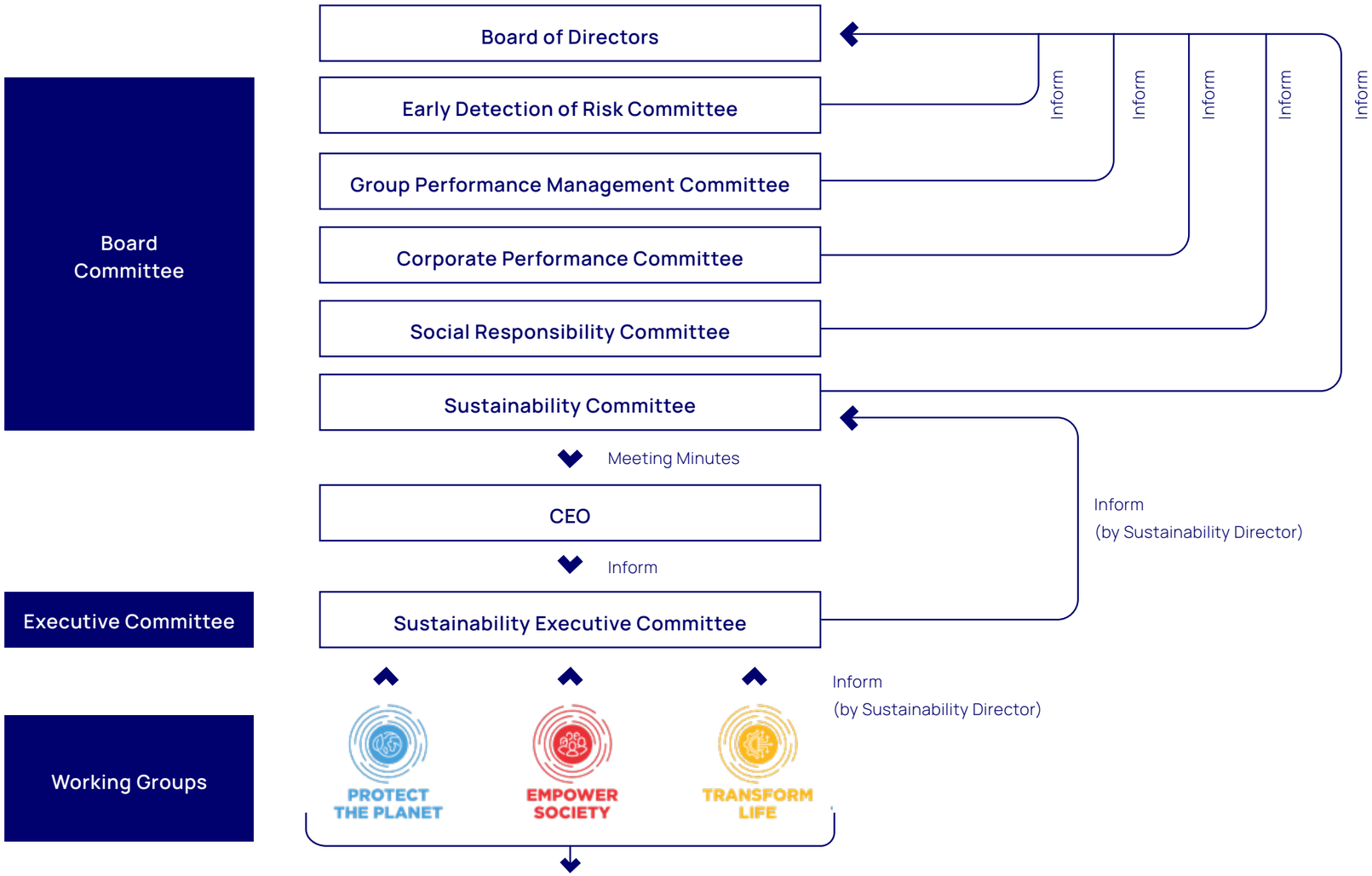
During committee meetings, risk and opportunity analyses are regularly reviewed, with comprehensive evaluations of national and international developments, global sustainability standards, regulations, sector trends, peer analyses, and emerging production technologies. In addition, stakeholder expectations, market dynamics, and regulatory changes are considered and integrated into decision-making processes. This approach ensures not only the management of current risks but also the proactive management of long-term risks and opportunities.

The Group has developed corporate policy documents to support sustainability management, which are enacted upon approval by the Board of Directors to guide corporate practices. The relevant policies can be accessed at https://www.sisecam.com/en/our-policies.

Şişecam Group Corporate Governance Regulation and Internal Directive

The Şişecam Group Corporate Governance Regulation and Internal Directive have been prepared to ensure the effective implementation of corporate governance principles within the Group. This regulation defines the organizational structure and functioning of the Board of Directors, its subordinate committees, and the Risk Management and Internal Audit departments. In addition, it defines the duties and responsibilities of the Corporate Governance and Compliance Coordination Department. Moreover, this regulation also outlines the corporate governance principles to be adhered to by Şişecam Group Companies and the operational principles of General Management in accordance with these principles.

3.2.3. Sustainability Governance Organizational Chart



Departments participating in these working groups: Sales and Marketing, Supply Chain, Production, R&TD, Finance, Strategy, Human Resources, Information Technologies, Quality, Investments, Transformation, Communication, Legal.

3.3. Governance of Sustainability Strategy and Targets

The Group considers the dissemination of the sustainability strategy throughout the organization and the effective management of sustainability targets as integral components of its corporate strategy. Sustainability and climate-related targets are carried out in an integrated manner across the entire organization, aligned with performance management and strategic planning processes.

The Group's strategic targets are defined by the Strategy Monitoring Directorate as a part of the Corporate Performance Management process and are distributed to the managers of the relevant departments. Sustainability and climate-related targets are among the Group's prioritized strategic focus areas and are disseminated throughout the organization by assigning them to positions at various levels, including C-level Executives, Senior Directors, Directors, Plant Managers, Group Managers, Managers, Specialists, and Assistant Specialists. Target setting and performance monitoring are conducted through the Performance Development System, managed by the Human Resources function. Year-end performance scores directly affect employees' bonus payments.

The Strategy Monitoring Directorate plays an active role in the strategic planning process and is responsible for ensuring the necessary coordination to guarantee the effective implementation of these plans across the Group. The Directorate coordinates the dissemination of strategic priorities throughout the entire organization and carries out necessary alignments during the process. It develops, manages, monitors, and reports on the corporate performance management system by tracking key performance indicators, prioritizing and managing the strategic initiatives and the strategy-related project portfolio.

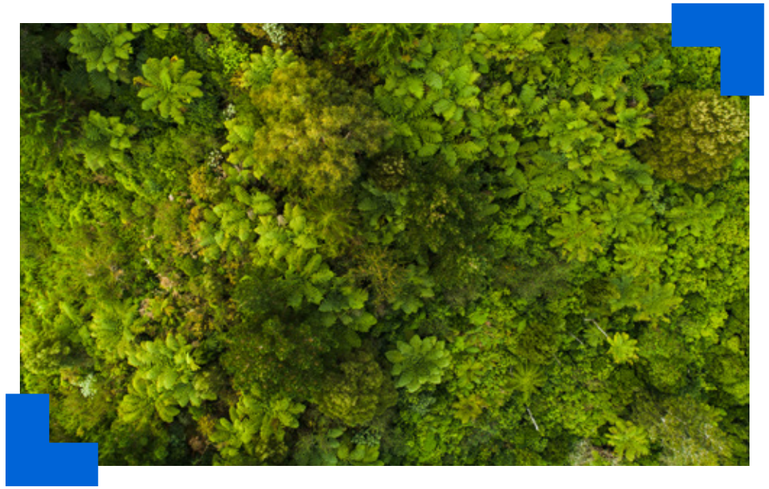
It is also responsible for end-to-end coordination of all investment requests across the Group, as well as monitoring and reporting of performance through dynamic investment management. In alignment with the Communication Coordination Department, it is responsible for communicating the Group's strategies across all levels through plant visits within the scope of the Strategy Deployment. It develops target- and metric-based systems to ensure effective implementation of the strategy, defines and monitors performance metrics, and provides feedback to all relevant stakeholders and the CEO by identifying issues, warnings, and progress in the implementation of the strategy.

The Group Performance Management Committee evaluates the Group's performance based on the achievement level of financial targets aligned with the annual plan and budgets, in accordance with the priorities set by the Board of Directors. Additionally, the Committee conducts a multidimensional and holistic performance assessment, considering not only financial metrics but also the Group's reputation, core corporate values, and sustainability targets. The Group's performance is presented to the Group Performance Management Committee at regular intervals. The scope of the Group's performance includes the performance criteria, projects, and processes that are part of the critical agenda items of the relevant year. Accordingly, content related to the Group's Sustainability Strategy is also included in this report. In 2024, sustainability-related parameters were evaluated at the Committee meetings. The Committee convenes four times a year to conduct evaluations within this scope.

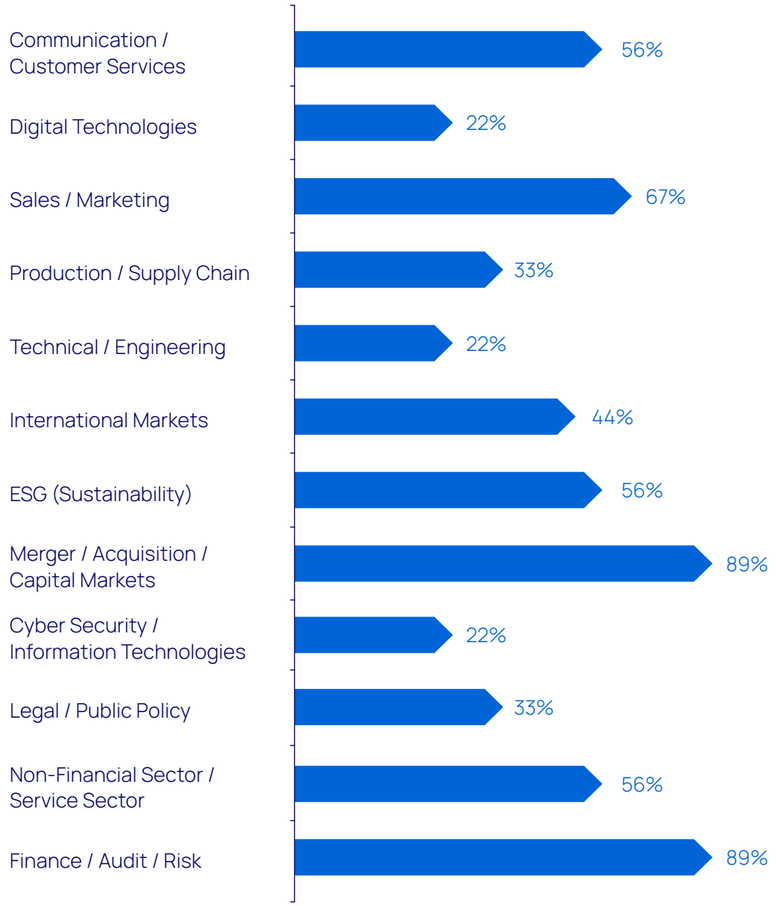
3.4. Sustainability and Climate-Related Competencies

The members of the Board of Directors possess strong competency in strategic areas such as sustainability, environmental, social, and governance (ESG) matters, as well as finance, risk management, and mergers and acquisitions (M&A). The Board of Directors Competency Matrix aims to systematically analyze the knowledge and experience of its members.

The competency assessment was conducted using a self-assessment method, considering each Board member's educational background, career experience, current responsibilities, and professional roles. The percentage indicated for each category was calculated by dividing the number of Board members who possess the relevant competency by the total number of members (9). For instance, if 5 members are identified as competent in the area of "Communication / Customer Services," the percentage for this category was reflected as 56%.



Board of Directors Competency Matrix



3.5. Integration of Climate-Related Performance into the Compensation System

The Group has integrated its sustainability and climate change mitigation targets into its entire organizational structure and has aligned its performance management system accordingly. Employees' contributions to climate-related targets are evaluated through performance scorecards and are linked to promotion opportunities.

The ESG targets defined under the CareforNext Strategy have been integrated into the annual performance evaluation scorecards of senior executives (C-Level) and accordingly incorporated into the bonus system. However, as of the current reporting period, the remuneration and bonus systems for senior executives have not yet been directly linked to specific climate-related metrics. These metrics are considered indirectly in the overall performance evaluation and are not associated with binding financial targets.

Sustainability targets are not limited to senior management but are also cascaded throughout the organization by translating them into operational targets for the relevant sub-teams. Thus, these targets are also utilized in monitoring team performance.

As stipulated by the remuneration strategy, the salaries of senior executives are not directly determined based on sustainability or climate-related metrics. However, since sustainability targets included in performance scorecards are part of the overall performance evaluation, they may indirectly influence bonus rates.

Within the scope of the "Annual Achievement Awards," implemented to boost motivation across the Group, projects submitted under all sustainability-related initiatives—including those focused on climate—are evaluated particularly under the category of "Life Protectors," thereby enhancing awareness.

4. Strategy

4. Strategy

Within the Group, climate-related risks and opportunities are integrated into corporate strategy development processes with the aim of enhancing long-term corporate resilience. These climate-related risks and opportunities are considered in all business decisions, including production, investment, procurement, and financial planning. The Group's strategic approach to climate-related risks and opportunities encompasses multiple dimensions, including the reduction of CO_2 emissions, improving energy efficiency, the use of alternative raw materials and energy sources, ensuring supply chain resilience, and developing a low-carbon product portfolio.

National and international regulations that define the responsibilities of industry in combating climate change necessitate a proactive governance approach. Regulatory frameworks such as the European Union Emissions Trading System (EU ETS), the Carbon Border Adjustment Mechanism (CBAM), and the European Green Deal, along with the obligations they impose, directly impact on both the Group's operational activities and long-term investment strategies.

The Group positions its sustainability strategy as a comprehensive risk management tool. Reducing the carbon footprint, ensuring compliance with environmental regulations, transitioning to low-carbon production systems, and adopting circular economy principles are among the core strategic priorities that guide the Group's business model and decision-making processes.

In line with the goal of becoming carbon neutral by 2050, a comprehensive low-carbon roadmap is being implemented. The Climate Change Mitigation Model is shaped by multi-faceted strategies, including investments in innovative technologies that support emission reduction, the use of alternative fuels, the transition to electric and hybrid furnaces, and waste heat recovery.

ŞİŞECAM | Care for Next

PROTECT THE PLANET

- Climate Change
- Water Use
- Circular Production

EMPOWER SOCIETY

- Corporate Heritage
- Equality, Diversity and Inclusion
- Talent Acquisition, Management and Development
- Occupational Health and Safety

TRANSFORM LIFE

- Digitalized Value Chain
- Sustainable Products
- Sustainability Across the Value Chain
- Value-Added Partnerships

4.1. Climate Transition Plan

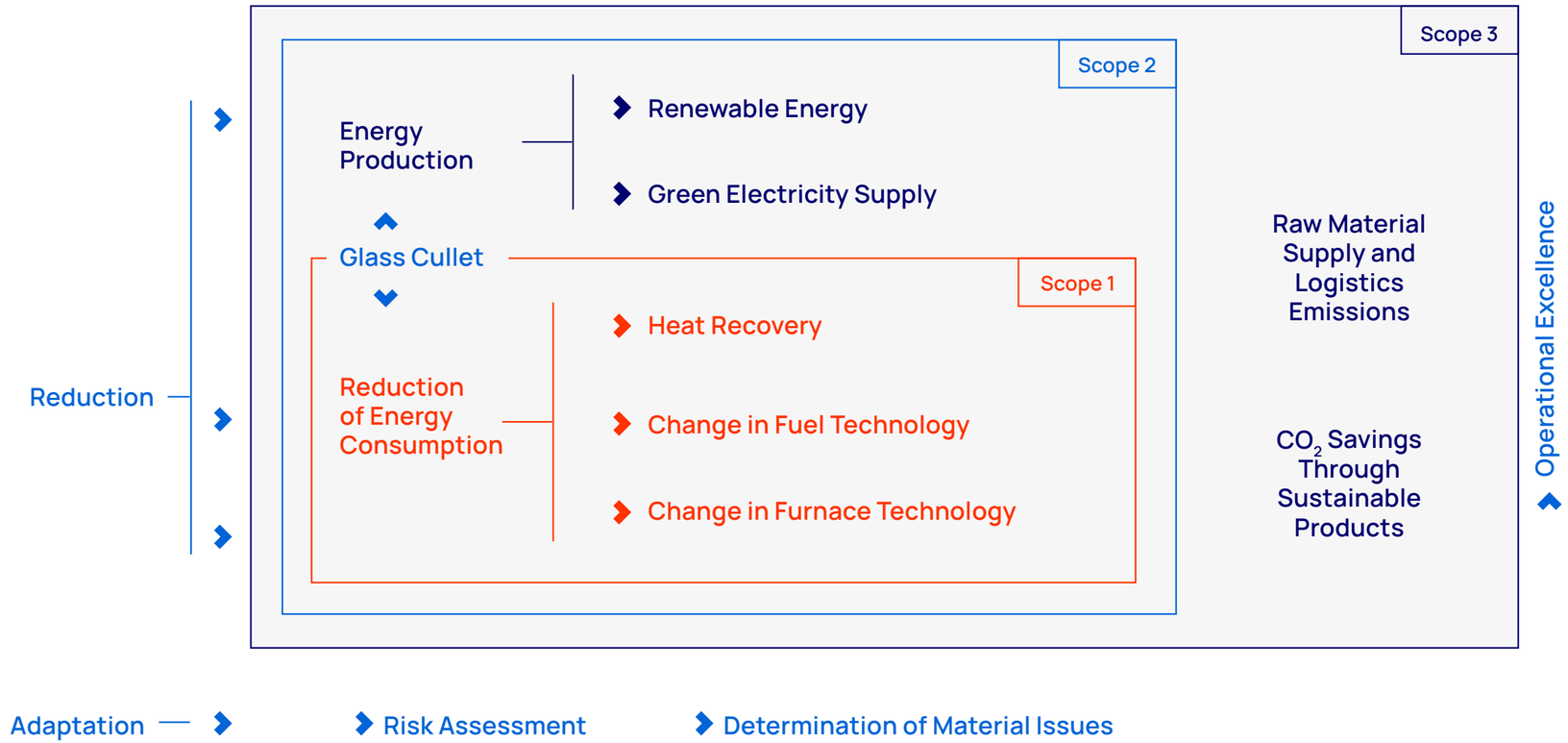
The Group's activity-based transition plans are grounded in its climate action business model, aiming to mitigate the potential impacts of climate change on the Group and to create long-term value throughout the transition to a low-carbon economy.

The Group's climate action business model is built on core transformation components such as efficiency, energy and technology transformation, circularity, and energy-efficient and sustainable products, in line with its commitment to achieving carbon neutral by 2050.

The Group conducts comprehensive analysis of the impacts of climate change on its business model, operations, and value chain, and integrates these impacts into its strategic decision-making processes. Within this scope, the relevant SASB sector standards for Construction Materials and Chemicals are referenced in identifying climate-related risks and opportunities, while their financial and operational impacts are systematically evaluated through scenario analyses and detailed impact assessments.

The business model is regularly reviewed by taking into account future market conditions, regulatory frameworks, technological developments, and changes in climate policy; these variables are linked to financially material sustainability factors defined by SASB. This approach also helps maintain competitiveness.

Our Business Model in the Combating Against Climate Change



Key Components of the Climate Transition Plan

Low-Carbon Production Technologies

Within the scope of the transition plan, key focus areas include electrification in production, the design of electric and hybrid melting furnaces, the development of compatible refractory materials, and the sectoral adaptation of carbon capture technologies (CCS/U). Key actions under this focus area include enhancing technological maturity and developing expertise and a knowledge base in this field through Research and Technology Development activities, as well as international collaborations and projects with industry and academia.

Energy Transition

Energy transition efforts focus on increasing the share of renewable energy in production and adapting carbon-free alternative fuels (e.g., biomethane, hydrogen) within the sector. Accordingly, as a first step, it is planned to reach a renewable energy capacity of 53 MWp installed power for self-consumption. In addition, plans include supporting renewable energy use through off-site investments and long-term clean energy purchase agreements. In geographic locations where renewable energy potential is, carbon-free electricity usage is ensured through Energy Attribute Certificates (EACs), such as IREC and Guarantee of Origin (GO) certificates.

Energy Efficiency

Within the scope of the climate transition plan, the Group addresses energy efficiency as a strategic priority and aims to reduce carbon emissions through digitalization in production processes, the use of renewable energy, and efficiency-driven investments. These efforts are positioned as a cornerstone of the transition plan.

Circularity

The use of glass cullet can significantly reduce energy consumption and, consequently, carbon emissions in glass production, especially in glass packaging. The Group's climate action model also encompasses strategic steps to increase the use of cullet.

Policy and Regulatory Compliance

The impacts of the European Union Emissions Trading System (EU ETS), currently in place, and a Turkish Emissions Trading System and Carbon Border Adjustment Mechanism (CBAM) expected to be implemented in Türkiye are among the key factors impacting the Group's transition plan. Within this framework, carbon pricing mechanisms are taken into account, and regular risk analyses are conducted for carbon-intensive activities. As a part of compliance efforts, Green Deal funds and incentive mechanisms are also monitored.

Sustainable Products

Demand for low-carbon products is expected to continue increasing, with a particularly strong upward trend in photovoltaic (PV) glass, energy-efficient architectural glass, and recycled raw materials. Through its product development activities and investments in sustainable products, the Group plays a role in the transition of the sector it supplies into a low-carbon economy.

Strategic Collaborations

The Group positions international collaborations as a strategic lever to achieve decarbonization targets. In alignment with the European Green Deal and global sustainability standards, the Group undertakes joint projects with multinational technology firms, research centers, and sector platforms to accelerate the transition to low-carbon production technologies. This approach not only mitigates the Group's environmental impacts but also embodies its vision to lead the sustainability-focused transformation of its global value chain.

4.2. Climate-Related Risks and Opportunities

Climate change stands out as one of the most critical sustainability risks globally, impacting economic, environmental, and social systems. Increased regulatory pressures, changing market dynamics, and physical impacts force companies to reshape their long-term corporate strategies. In this context, the systematic identification, assessment, and management of climate-related risks and opportunities is of strategic importance for enhancing corporate resilience.

The Group conducts comprehensive analyses of both physical and transition risks across all geographic locations where it operates, taking into account the potential impacts of climate change. At the same time, the Group evaluates technological, operational, and financial opportunities that may arise during the transition to a low-carbon economy, integrating these opportunities into its business model to support its sustainable growth targets.

Within this framework, the Group's approach to climate-related risks and opportunities is addressed through an integrated structure encompassing governance, strategy, risk management, and performance metrics, in accordance with the TSRS 2 standard. These aspects are reported considering their short-, medium-, and long-term impacts.

This approach helps enhance corporate resilience against climate change while also ensuring transparent and accountable responses to stakeholder expectations.

In assessing climate-related risks and opportunities, the Group considers impacts on both the chemicals and construction materials sectors, referencing the relevant SASB sector standards within this scope.

Within this framework, the Group monitors the following areas—defined by SASB for both sectors—while managing climate-related risks and opportunities: reduction of greenhouse gas emissions and carbon footprint; strengthening energy management and energy efficiency practices; increasing the use of renewable and alternative energy sources; monitoring water consumption in production on a watershed basis; and tracking products with lower environmental impact (i.e., sustainable products) throughout their production and usage phases.

The Group applies a revenue-based financial materiality assessment framework to analyze the financial impacts of climate-related physical and transition risks. This methodology enables the translation of quantitative assumptions, used across different climate scenarios and time horizons, into measurable and comparable levels of financial impact.

The Group uses internationally recognized climate change scenarios to assess climate-related risks and opportunities and has defined the time horizons as short-term (5 years), medium-term (10 years), and long-term (15 years) to disclose the results of these scenarios in a holistic and meaningful manner. Details of the scenarios are presented in Section 4.3.1. Scenario Analyses.

In the analyses conducted within this scope, the impacts of climate change on operational processes, the business model, and the value chain are addressed from a holistic perspective and integrated into the organization's decision-making processes, taking into account both short- and long-term impacts.

At the same time, the impacts of each risk and opportunity element on financial performance are analyzed and linked to the corporate risk management systems.

4.2.1. Impacts of Climate-Related Risks and Opportunities on Financial Planning

Climate-related risks and opportunities are integrated not only into business strategies but also into financial planning within the Group. Operating in energy- and natural resource-intensive sectors, the Group manages the operational and financial impacts of factors such as carbon pricing, rising energy and raw material costs, and physical impacts of climate change through a holistic approach.

Climate-related risks and opportunities are analyzed across different time horizons—short, medium, and long term—and are reflected in financial and strategic planning accordingly.

- The analyses revealed that, in the current period and short term, no significant risk was identified that exceeds the threshold value set by the Group.
- In the short term, regulatory frameworks such as CBAM and the ETS have the potential to create cost pressure on carbon-intensive operations. Cost projections related to carbon pricing are taken into account in feasibility studies and new investment decisions.
- In the medium term, projects aimed at transitioning to renewable energy sources and Research and Technology Development investments in low-carbon technologies both facilitate compliance with environmental obligations and have the potential to reduce operational costs. Accordingly, the Group allocates a significant portion of its Research and Technology Development expenditures to sustainability-related products and technological transformation projects.
- Likewise, increased market demand for low-carbon products, as well as potential revenue growth and market share gains from the development of sustainable products in the medium term, are also considered in long-term revenue projections.
- In the long term, the Group plans a full transition to low-carbon production processes in line with its target to become carbon neutral by 2050, aiming to maintain its competitiveness in international markets and maximize energy efficiency through advanced technology investments.

Physical and transition risks, along with climate-related opportunities, are identified through an approach aligned with international standards, and their probability and impacts are assessed. Necessary mitigation actions are implemented, and all processes are conducted to ensure that climate-related matters are managed in an integrated manner within the business strategy.

4.3. Materiality-Based Risk Analysis

To effectively manage the impact of climate-related risks on corporate strategy, these risks must be analyzed according to their materiality levels. Within this scope, the potential impact, probability, and time horizon of each risk are systematically

assessed, and the short-, medium-, and long-term impacts to which the organization may be exposed are evaluated from a holistic perspective. The following sections provide detailed information on the materiality-based analysis approach and the scenario analyses conducted within this framework.

4.3.1. Scenario Analyses

Climate scenario analyses are based on scenarios developed by the Network for Greening the Financial System (NGFS). NGFS scenarios are analytical frameworks developed to assess the potential impacts of climate change on the economy and financial system. Rather than providing definitive forecasts for the future, they help to understand the potential impacts of physical and transition risks on the economy under different climate and policy scenarios. Designed to align with the Paris Agreement, these scenarios are based on scientific scenario frameworks developed by the Intergovernmental Panel on Climate Change (IPCC), including the Shared Socioeconomic Pathways (SSPs) and Representative Concentration Pathways (RCPs).

In the transition risk analysis, three primary scenarios based on the IPCC's climate projections and classified by the NGFS are utilized. Both the Below 2°C scenario from the Orderly scenarios and the Current Policies scenario from the Hot House World scenarios were evaluated. In addition, the No Policies scenario, part of the Too Little, Too Late scenarios, was also evaluated. Physical risk analyses have been conducted to identify the potential impacts of climate change on operational activities and to develop resilience strategies addressing these risks. Climate-related physical risk assessments are based on the IPCC's RCP 2.6 and RCP 8.5 scenarios. Within this framework, all the Group's production facilities and warehouses have been included in the location-based analysis, and both acute and chronic physical risks have been comprehensively assessed. Prioritized physical risks—including water stress, flooding, excessive precipitation, fire, extreme heatwaves, and rising sea levels—have been systematically evaluated through scenario analyses.

NGFS Scenarios	No Policies	Current Policies Scenario	Below 2°C Scenario
Projected Temperature Increase by 2100	>4°C	2.7°C	<2°C
Probability of Occurrence	Low	High	Medium
Overview	It assumes a world where no new climate policies are introduced globally, and current emission trends persist. Given the persistently high levels of greenhouse gas emissions, no significant transition is expected in carbon-intensive sectors such as glass and soda ash.	It assumes the continuation of existing national and international climate policies currently implemented by countries. This leads to a limited transition in the glass and soda ash sectors; however, no systemic change is anticipated.	The aim is to limit the increase in global temperature to below 2°C in line with the targets set under the Paris Agreement. Within this scope, it is assumed that rapid and comprehensive climate policies will be implemented on a global scale, leading to structural transitions in the glass and soda ash sectors.
Transition Risk Scenario	-	Downscaling [REMIND-MAgPIE 3.3-4.8]	Downscaling [REMIND-MAgPIE 3.3-4.8]
Physical Risk Scenario	SSP5-8.5	-	SSP1-2.6

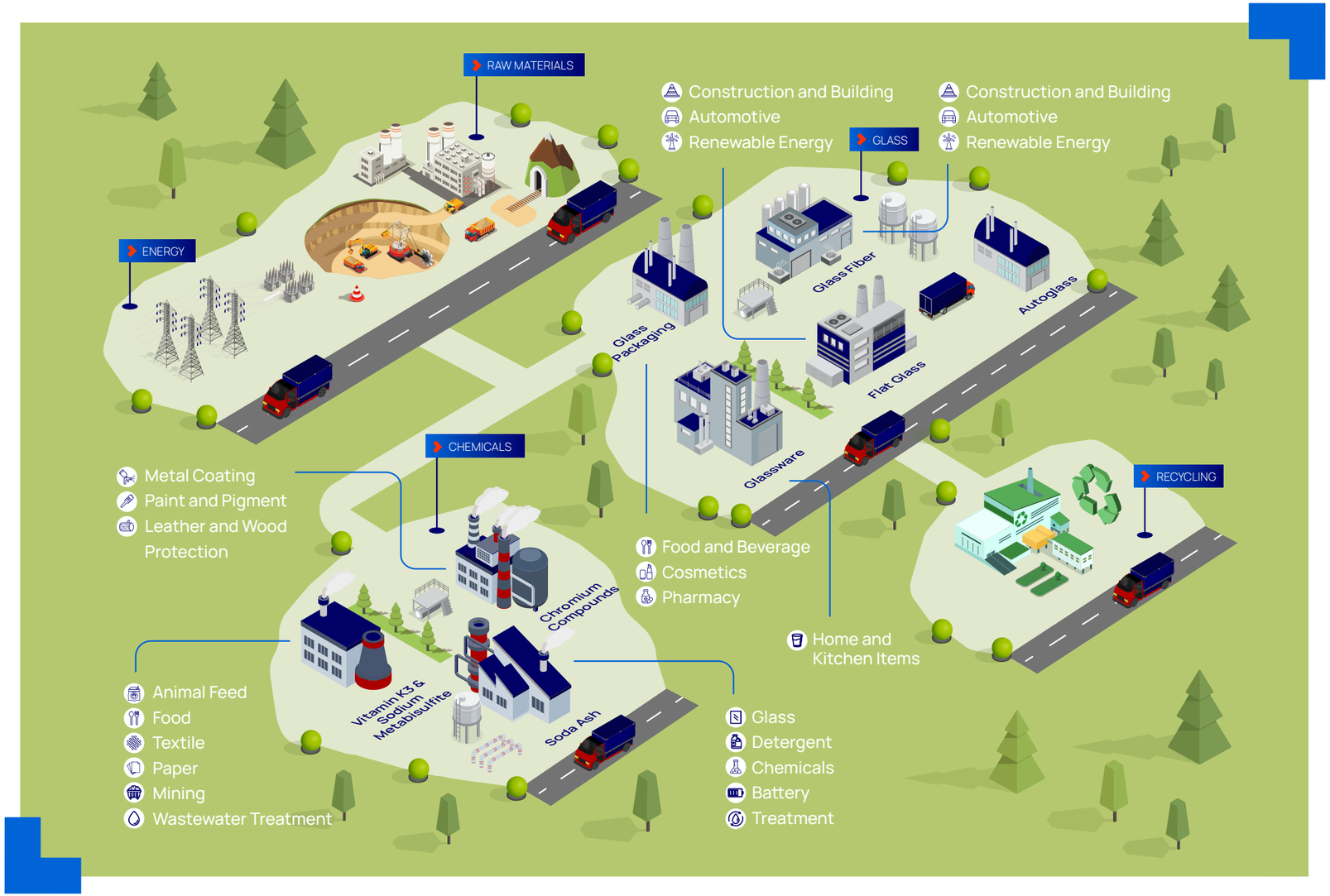
Operational Model and Value Chain

The Group's value chain encompasses an integrated and comprehensive structure, beginning with the extraction of natural resources, followed by their conversion into glass and chemical products, the delivery of these products to customers via logistics processes, their utilization across various sectors, and their reintegration into the cycle through recycling at the end of their lifecycle.

The first link in the chain consists of procuring the key inputs used in production. The primary raw materials for glass production such as silica sand, soda ash, limestone, dolomite, and feldspar are procured along with other key raw materials from the Group's own mines, production facilities, and external suppliers, while energy demand is met through both Şişecam Enerji and a mix of renewable and fossil fuel sources. Packaging materials, process chemicals, and other auxiliary inputs are also critical factors for ensuring quality and efficiency. All these resources are transported to the production facilities via the logistics infrastructure.

In the production phase, the Group operates in two main areas: glass and chemicals. Glass production is conducted across five key categories—glass packaging, glassware, automotive glass, glass fiber, and flat glass—and serves a broad range of sectors, notably construction, automotive, energy, and food. On the chemical production side, the Group contributes to various sectors—primarily the glass industry—through products such as soda ash, chromium compounds, and vitamin K3. All manufactured products are delivered to global customers via comprehensive logistics systems.

The final stage of the value chain encompasses the recycling and disposal processes of products at the end of their lifecycle. The Group engages in the recycling process of glass products—primarily glass packaging—through its recycling facilities. Recycling processes are conducted in integration with logistics systems, contributing to the efficient use of resources through a circular economy approach.



4.3.1.1.Assessment of Policy Risks

A scenario-based analysis was conducted to assess the impacts of climate-related policy risks that the Group may be exposed to. Within the scope of this analysis, two key scenarios—Current Policies and Below 2°C—representing different temperature increases and transition pathways, have been designed. Each scenario incorporates different assumptions regarding elements such as carbon pricing, timing of policies, and regulatory scope. In the analyses conducted, current carbon prices were evaluated separately by country and sector, taking into account the prevailing market conditions in each region. In addition, the countries have been categorized into three groups as leaders, followers, and laggards based on their ambition levels in climate policies. Future carbon pricing, on the other hand, has been shaped in line with the transition pathway projected under each scenario.

In the scenario analyses, not only carbon pricing and policy changes but also metrics such as inflation rates, interest rate trends, and macroeconomic growth projections have been taken into consideration, and the Group's financial resilience has been evaluated using a holistic approach. Long-term forecasts have been developed based on market growth projections and macroeconomic forecasts. Financial models have utilized assumptions of the weighted average cost of capital (WACC), which is employed in investment evaluations.

Current Policies Scenario

Current Policies Scenario assumes that Emissions Trading System (ETS) is not implemented at the national level. This approach is based on the assumption that carbon prices will be calculated on a comparative basis relative to the base year, alongside the model's general assumptions. For this reason, it is anticipated that the effects of current policies will offset one another and will not contribute meaningfully to the transition process. However, as an exception, the Carbon Border Adjustment Mechanism (CBAM) has been taken into account in this assessment. This mechanism is expected to gradually align with EU ETS price levels, which are set at €65 per ton in the model.

Below 2°C Scenario

This scenario aims to limit the increase in global temperature to below 2°C in line with the targets set under the Paris Agreement. It is anticipated that the structural transformations required to achieve this target will take time, and accordingly, the preparation period needed for the establishment and operationalization of national Emissions Trading Systems (ETS) has been considered. Accordingly, carbon prices are assumed to remain at zero during the first two years of the scenario.

> In assessing policy risks, a nine-year gradual transition period covering all countries is anticipated for the implementation of CBAM and its alignment with the EU ETS in both scenarios. During this period, free emission allowances are planned to be gradually phased out, with this timeline accepted as the standard across all countries.

4.3.1.2. Assessment of Technology Risks

The analysis of technology risks relies on an Asset Impairment Model that focuses on the potential decline in the functionality of assets dependent on fossil fuel use, considering the expected reduction in global fossil fuel supply alongside the energy transition process. Based on the expectation that access to fossil fuel resources will gradually become limited, it is assessed that the operational lifespan of physical assets reliant on these resources will shorten, leading to a faster-than-anticipated impairment of their value on the balance sheets.

The analysis covers only physical assets reliant on fossil fuels, with their future applications examined based on scenario analysis. This assessment utilizes scenario outputs derived from the NGFS REMIND-MAgPIE 3.3–4.8 model. The analysis has been carried out within the framework of two main scenarios: Current Policies Scenario, and Below 2°C Scenario. Each scenario examines future fossil fuel supply levels based on their share in the energy system under different assumptions and aims to analyze technology-driven impairment risks.

Under the scenarios, future fossil fuel supply levels have been estimated based on their share in the energy mix. In this analysis, energy resources are classified into two main categories: fossil fuels and non-fossil resources. In the scenarios, it is assumed that as the share of fossil fuels in the energy system declines, the utilization of assets dependent on these resources will decrease proportionally.

4.3.1.3. Assessment of Physical Risks

In the analysis of physical climate risks, the extent to which the Group's assets and the regions in which it operates may be exposed to climate-related threats has been assessed. Within the scope of the analysis, both acute and chronic physical risks associated with climate change have been assessed. The primary threats assessed include heatwaves, the number of days exceeding 35°C, river floods, heavy precipitation, temperate zone storms, storm wind speeds, water stress, and drought.

To manage climate-related physical risks, comprehensive risk analyses covering all facilities are conducted, including detailed assessments of water risks related to water-dependent operations and measures to ensure effective water management.

4.3.1.4. Assessment of Market Risks

Because factors like consumer preferences, market trends, and shifts toward sustainable products vary across sectors and regions, modeling these risks using standard numerical data is challenging. Therefore, market risks have been qualitatively assessed based on feedback from key value chain actors such as suppliers and customers, climate-related public sources, and the Group's strategic plans.

4.3.1.5. Assessment of Legal Liability Risks

Climate-related litigation risks specific to the Group are not currently expected to have a financially material impact. Accordingly, a scenario-based qualitative analysis was conducted, taking into account factors such as potential reputational concern, regulatory compliance mechanisms, and increasing pressure from civil society.

4.3.1.6. Assessment of Reputational Risks

The impacts of climate change on corporate reputation depend on multiple factors, including consumer reactions, employee engagement, investor perceptions, and supplier relationships. As most of these factors emerge over the long term and are challenging to monitor directly through numerical data, a qualitative assessment approach based on governance processes has been adopted.

4.3.2. Assessment of Opportunities

Market opportunities linked to the growing adoption of low-emission products and services, as well as production efficiency opportunities related to renewable energy use and energy efficiency measures—which hold significant potential for the Group—have not been quantitatively assessed within the scope of the current scenario analysis. The main reasons for this are summarized below:

Uncertainty Regarding Demand Dynamics: The growth rate, geographical distribution, and price elasticity of demand for sustainable products cannot be reliably projected. Changes in consumer preferences are shaped not only by environmental concerns but also by various other factors such as cost, performance, and regulatory pressures. This multi-dimensional structure complicates demand modeling efforts.

Uncertainty Regarding Policies and Incentives: The scope, duration, and country-specific variability of incentives for renewable energy and energy efficiency investments make forecasting difficult. Moreover, regulatory frameworks for the energy transition have not yet been fully finalized and exhibit regional differences.

Limited Access to Quantitative Data: There is insufficient historical or market-based data to predict the future revenue impacts of sustainable product segments. Operational data within the Group (e.g., marginal financial gains from energy efficiency) have not yet been sufficiently standardized for scenario modeling.

Multivariate Dependencies: The identified opportunities are influenced by interdependent external factors such as carbon pricing, energy costs, regulatory developments, and technological dynamics. This complicates the measurement of the direct and discrete financial impacts of these opportunities.

For these reasons, the opportunities have been evaluated using a qualitative approach within the scope of the current analysis. The assessment process took into account market growth potential, competitive positioning, contribution to CO_2 emissions reduction, readiness for compliance processes, reputational gains, and innovation capabilities. The assessments are carried out in alignment with the Group's value chain and governance strategies, supporting strategic decision-making processes.

4.4. Climate-Related Material Risks

Climate-Related Risks	Risk Description	Impact of the Risk on the Business Model and Value Chain	Impact of the Risk on Strategy and Decision-Making	Impact of the Risk on Financial Position, Financial Performance, and Cash Flows	Position of the Risk within Corporate Risk Management
Transition Risk – Policy **Type of Impact:** Expected **Time Horizon:** Short, Medium, Long **Position in the Value Chain:** Direct Operations & Supply Chain **Geographical Areas of Risk Concentration:** All Group Operations **Production Groups Where the Risk is Concentrated:** Glass and soda ash productions	Uncertainties arising from changes in climate-related policies, regulations, and carbon pricing, along with their potential financial impacts, are present.	The Group is subject to carbon pricing mechanisms in the emission-intensive sectors where it operates. Four glass production facilities in Europe fall within the scope of the EU ETS. In line with the EU ETS, a certain number of free emission allowances are allocated annually, and companies must purchase additional allowances from the market if they exceed this limit. As the sector in which the Group operates is among those exposed to carbon leakage risk, free allowances and product benchmarks are expected to be reduced between 2026 and 2030 in line with the Fit for 55 targets, with a complete phase-out anticipated after 2030 following inclusion in the CBAM. These developments impose structural cost pressures on the sector, necessitating a restructuring of the Group's business model and value chain. Moreover, this system may increase carbon costs not only at the facility level but also throughout the entire supply chain. Suppliers subject to the EU ETS may pass their increased costs on to the Group, potentially raising the costs of energy-intensive inputs such as glass and soda ash. For export purposes, glass products and soda ash are planned to be included within the scope of the CBAM in the future. Due to the Group's high export volume of these products, additional costs arising from CBAM may directly impact the value chain within the export process. This impact is expected to increase in the period following 2026. The national ETS system to be established under the Climate Law is expected to generate carbon costs for the Group's operations. This development will also necessitate value chain adaptations in Türkiye operations to address carbon costs.	The potential impacts of carbon pricing systems are incorporated into the Group's strategic planning processes. Climate-related risk analyses are conducted separately by business area and geographic location, while the impacts of carbon pricing on production and exports are evaluated through scenario-based modeling. To account for the potential expansion of the CBAM scope, risk analyses incorporating product- and country-specific carbon costs are conducted, and this data is utilized in strategic planning. The Group's Türkiye operations are expected to be subject to the national ETS system to be established under the Climate Law. This has the potential to create cost pressures on carbon-intensive operations. Projections on carbon pricing are utilized in feasibility studies and considered as an input in investment decision-making.	Emissions Trading Systems and carbon pricing mechanisms have the potential to increase the Group's operational costs. Rising prices of EU emission allowances (EUA) under the EU ETS, along with the gradual phase-out of free allowances, may create pressure on the cost structure. This pressure is expected to intensify in the period after 2030. Under the planned Türkiye ETS, carbon costs may also be incurred by Türkiye operations. These developments necessitate factoring emission costs into cash flow management and financial planning processes. In export markets, the expansion of the CBAM scope poses a risk of margin loss in export revenues.	◆ Increased operating expenses (higher compliance costs) ◆ Derecognition, impairment, and decommissioning of existing assets before their expected lifespan due to policy changes ◆ Increased costs and/or reduced demand for products and services resulting from fines, penalties, or regulatory/legal decisions

*Details of the financial materiality assessment are provided in Section 2.6. Materiality.

4.4.1. Assessment of Material Risks

Material Risk	5 Years			10 Years			15 Years		
	No Policies Scenario	Current Policies Scenario	Below 2°C Scenario	No Policies Scenario	Current Policies Scenario	Below 2°C Scenario	No Policies Scenario	Current Policies Scenario	Below 2°C Scenario
Policy Risks									

4.4.1.1. Financial Impact Threshold:

The table below outlines the thresholds for classifying the estimated financial impact by percentage of annual revenue. Each level reflects the potential severity of climate-related risks.

Risk Scale	Impact (as % of Revenue)
	<1%*
	1% – 5%
	6% – 10%
	>10%

*Below the financial materiality threshold set for Şişecam.

The Group has assessed its climate-related transition and physical risks over 5-, 10-, and 15-year time horizons in line with the scenarios detailed in Section 4.3.1. Scenario Analyses. The magnitude of the financial impact is visualized using a color scale, where darker shades represent a higher impact.

Among the risks assessed, only the policy-driven transition risk stemming from carbon pricing mechanisms was found to potentially create a material financial impact. These risks become material starting from the 10th year under the Current Policies scenario, whereas they show a material impact from the 5th year under the Below 2°C scenario.

4.4.2. Climate-Related Opportunities

Climate-Related Opportunities	Opportunity Description	Strategic Advantages	Actions Taken Regarding Opportunities
Opportunity - Market: Development and/or expansion of low-emission goods and services **Time Horizon:** Short, Medium, Long **Position in the Value Chain:** Direct Operations and End Use (Downstream) **Geographical Areas of Opportunity Concentration:** EU, USA, India **Products of Opportunity Concentration:** Architectural Glass, Photovoltaic (PV) Glass, Light-Weight and Highly Recycled Glass Packaging	The Group has observed an increasing market demand for sustainable and low-emission products, particularly in sectors such as construction, automotive, and packaging. With investments in energy-efficient glass, recycled-content products, and eco-friendly chemical solutions, the Group contributes to global carbon reduction efforts while enhancing its competitive strength. These innovations not only align with regulatory trends but also boost customer interest, enabling the Group to enter new markets and reinforce its leadership in sustainable production.	• Revenue growth driven by rising demand for sustainable products • Strengthening brand reputation and customer loyalty • Access to new markets and customer segments • Potential to benefit from government grants, incentives, and subsidies • Enhanced competitive advantage within the sector	The Group is expanding its product portfolio with low-carbon, energy-efficient, and recycled-content products to turn rising market expectations into opportunities as part of its climate change mitigation efforts. Energy-efficient architectural glass, glass products designed for solar energy applications, and lightweight glass packaging containing a high proportion of recycled raw materials are among the tangible outcomes of this strategy. The energy glass processing line to be commissioned at the Mersin-Tarsus facility in 2025, along with three new architectural glass coating lines set to become operational in Türkiye, Italy, and Bulgaria in 2026, are among the investments planned to meet rising demand. Increasing demand for photovoltaic (PV) glass, energy-efficient products, and sustainable raw material use in the glass sector is creating new revenue streams and high-margin product sales opportunities for the Group. Accordingly, priority is given to technologies such as waste heat recovery, electric furnaces, and alternative fuel systems aimed at reducing the carbon footprint; these projects also offer opportunities to benefit from investment incentives under carbon regulations and EU adaptation funds.
Opportunity - Production Efficiency: Participation in renewable energy programs and implementation of energy efficiency measures **Time Horizon:** Short, Medium, Long **Position in the Value Chain:** Direct Operations & Supply Chain **Geographical Areas of Opportunity Concentration:** All Group Operations	The Group actively integrates renewable energy sources and energy-efficient technologies into its operations to reduce CO_2 emissions and improve cost efficiency. In addition to the Group's investments in on-site solar and wind energy projects, the commissioning of waste heat recovery systems is reducing its dependency on fossil fuels. These initiatives contribute to reducing Scope 1 and Scope 2 emissions while also enhancing long-term energy security and operational resilience.	• Cost Savings • Reduction of CO_2 Emissions • Competitive Advantage • Regulatory Compliance • Reputation Enhancement • Technological Innovation	The Group is increasing its investments to enhance the efficiency of its production processes as part of its climate change mitigation efforts. By shifting to renewable energy sources, the Group reduces its external energy dependency while achieving lower operational costs and greater long-term cost predictability. The total installed renewable energy capacity, which stands at 10 MWp in 2024, is planned to exceed the 53 MWp target by 2030 through planned on-site and off-site investments. Thanks to clean electricity generated by solar power plants for self-consumption in 2024, approximately 5,000 tons of energy-related indirect CO_2 emissions (Scope 2) have been avoided annually. With the renewable energy capacity projected for 2030, approximately 140,000 tons of CO_2 emissions are expected to be avoided annually. In addition to renewable energy investments, the Group produces carbon-free electricity for self-consumption through waste heat recovery. The existing waste heat recovery capacity of approximately 75 MWe is expected to exceed 90 MWe with the addition of the planned facilities.

4.5. Climate Resilience

The Group prioritizes building a resilient operational structure to address the potential risks posed by climate change across all the regions in which it operates. In this context, climate resilience represents not only protection against the physical and transition risks posed by climate change but also a comprehensive process through which the Group secures operational sustainability by transforming these risks into strategic opportunities. The Group's integrated operations across diverse regions require enhancing adaptability to climate-related uncertainties and ensuring long-term business continuity. The Group's climate resilience approach is ensured through the actions implemented as part of the climate action business model detailed in Section 4.1. Climate Transition Plan.

The Group has adopted a holistic approach to climate change mitigation, encompassing both actions to reduce greenhouse gas emissions and measures to adapt to current and anticipated climate impacts. The activities carried out within this scope aim to minimize environmental impacts while enhancing corporate resilience.

Within this framework, the strategic actions taken to mitigate climate-related risks and support adaptation are presented below.

4.5.1. Mitigation and Adaptation Efforts

Risk Analysis

Scenario analyses serve as a key tool in shaping the Group's strategic approaches to enhancing climate resilience. These analyses are integrated into strategic planning processes to assess climate-related risks and opportunities. Within this scope, the Group assesses climate-related risks by considering various scenarios based on different temperature increase assumptions.

Technology Analysis and Roadmap

The Group treats technological transformation as a strategic priority in line with its low-carbon production target. Within the framework of the low-carbon roadmap developed to become carbon neutral by 2050, investments in existing and innovative technologies supporting emission reduction are evaluated by production type and geographic region. Within this scope, initiatives such as the use of alternative fuels, transition to electric and hybrid furnace technologies, and flue gas and waste heat recovery aim to keep the strategy dynamic in reducing carbon intensity across production processes.

Operational Improvements

The Group invests in technologies that enhance energy efficiency to ensure its emission levels remain within allocated allowances. The Group continuously enhances applications such as heat recovery to furnaces from combustion gases and waste heat recovery from flue gases. Additionally, the Group's standard practices include the use of externally sourced cullet and investments in energy-efficient equipment. Initiatives aimed at reducing energy consumption in auxiliary services, such as compressed air, are consistently prioritized. The Digital Furnace Monitoring Technology enables improvements in operational processes, optimization of maintenance activities, extension of furnace service life, and reduction of potential risks. Additionally, data analytics efforts continue to optimize glass thickness changeover times and improve furnace efficiency. A significant portion of Research and Technology Development investments is allocated to projects aligned with sustainability priorities. Accordingly, green financing and incentive opportunities are actively evaluated.

New Furnace Designs and Clean Technology Investments

The Group evaluates necessary design and technology investments to make existing and planned production facilities more efficient and less dependent on fossil fuels. For this purpose, options such as furnace electrification and new furnace technologies are considered from the design phase onward. For instance, the Group aims to achieve higher-than-conventional electric boosting ratios in its glass packaging furnaces in Hungary.

As part of its low-carbon roadmap and energy strategy efforts, the Group identifies alternative technologies and directs its investments accordingly. Under the low-carbon roadmap, energy transition, waste heat utilization, alternative fuel applications, and innovative technologies are evaluated. In 2024, the "Glass Production—Low-Carbon Production Roadmap" was completed, and the next phase focusing on soda ash production was initiated.

In addition, ongoing Research and Technology Development activities in areas such as electric and hybrid furnaces and hydrogen-fueled production systems are supported through participation in technology development projects aimed at reducing emissions in energy-intensive processes. By participating in the ZeroCO_2-Glass project led by the International Partners in Glass Research (IPGR), the Group aims to develop innovative solutions for energy efficiency and carbon-neutral production technologies. In addition, testing has commenced at the Şişecam Soda Lukavac Plant on the potential use of biomass as a substitute for coal, with 1,500 tons of wood

shavings and 500 tons of biomass utilized in energy generation processes.

Renewable Energy Investments

Significant investments are being made in line with the target of becoming carbon neutral by 2050 and the commitment to increase renewable energy use in production eightfold by 2030. The goal is to reach a total installed capacity of 53 MWp for self-consumption within the boundaries of the production facilities. Solar power generation has been significantly increased within the Group's operations in Türkiye (10 MWp as of 2024).

Upon completion of the rooftop and ground-mounted photovoltaic (PV) systems currently under installation at the Eskişehir and Ankara plants, it is planned that 5% of the electricity consumption at Ankara Flat Glass and Eskişehir Glass Packaging Plants, and 13% at the Eskişehir Glassware Plant, will be supplied by solar energy generated from these PV systems. In 2024, 10.7% of total electricity consumption was met through waste heat recovery and on-site renewable energy generation. In line with the plan, ground-mounted solar power plants are expected to generate approximately 185,000 MWh of electricity annually, meeting 11% of the total electricity demand of the plants in Türkiye through renewable sources.

Circularity

In line with its circular economy approach, the Group pursues multi-faceted efforts to increase its circularity rate. Within this scope, design solutions that facilitate the reintegration of raw materials and products into the production cycle are developed, while functional designs are implemented to extend product lifespan. In addition, initiatives aimed at enhancing the efficiency of post-consumer recycling processes are also supported.

In line with the target to use 35% external cullet in glass packaging products by 2030, investments are being steadily pursued to strengthen the recycling infrastructure and increase the capacity of existing facilities. As part of these efforts, 202,367 tons of glass waste were recycled, and 305,012 tons of external cullet were used in glass packaging production as of 2024. Through the use of external cullet supplied by Şişecam Çevre Sistemleri in production processes, 117,373 tons of carbon emissions were avoided, 135,586 MWh of energy was saved, and the use of 242,841 tons of natural raw materials was prevented.

Collaborations

The Group supports its low-carbon growth strategy through international partnerships established at a global scale. Accordingly, the Group collaborates with international platforms such as Hydrogen Europe and the European Solar Photovoltaic Industry Alliance, while playing an active role in strategic international initiatives like Glass Futures.

Sustainable Product Investments

Research and Technology Development efforts and investments in sustainable products—including energy-efficient architectural glass, solar energy glass, and lightweight glass packaging—are ongoing. In 2024, a total of 90 weight reduction projects across eight different categories were completed in glass packaging design. In solar panel glass, energy efficiency is enhanced by increasing light transmittance through advanced coating technology; coating conditions are optimized to reduce chemical consumption, heavy metal and organometallic emissions are minimized, and a transition to eco-friendly alternatives is targeted. With the investments in three new coated lines with a combined capacity of approximately 20 million m² in Türkiye, Italy, and Bulgaria, as well as one energy glass production line in Türkiye with a net capacity of 26.6 million m², the aim is to capture market share in these rapidly growing markets. In 2024, sustainable products accounted for 16% of the Group's turnover.

Resilient Supply Chain and Operational Continuity

Within the framework of managing climate-related physical risks, detailed analyses and implementations are carried out to ensure operational continuity across all production inputs. To maintain continuity in production, supply security is ensured through efficient water use, circular raw material utilization, and alternative supplier agreements, while operational continuity is strengthened by flexible local production capacity and digitalization initiatives. In addition, supply continuity is supported by strengthening partnerships with local suppliers, while contributing to local economic development. The management of conflict minerals and chemicals plays a key role within the scope of sustainable supply practices; information and audit processes are conducted to ensure that suppliers comply with international standards and legal regulations in these areas. In 2024, 69% of the raw materials used were sourced locally, while local procurement accounted for 79.7% of the total procurement budget.

4.5.2. Trade-off

One of the core principles of the Group's sustainability strategy is to establish a balanced approach between environmental impacts and social and economic benefits. During the planning phase of new operations, reducing the environmental impact of the investment and supporting regional development are among the key evaluation criteria.
For new plant investments, a comprehensive Environmental

Impact Assessment (EIA) is conducted prior to the initiation of the project. This ensures a detailed analysis of environmental factors such as water resources, air quality, ecosystem pressure, emissions, and natural resource use. Decision-making processes take into account physical factors such as climate risks and water stress.

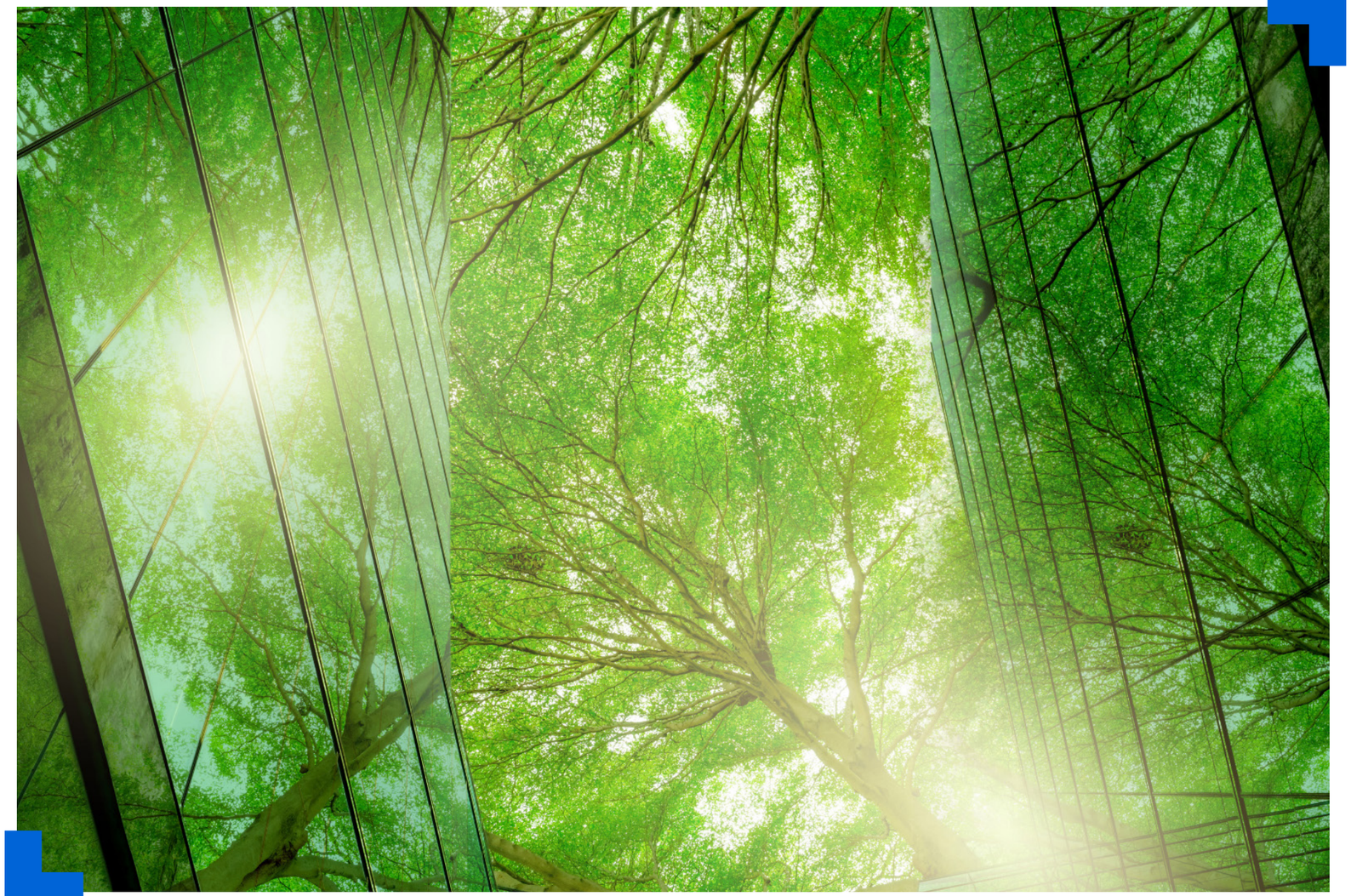
The use of renewable energy, environmental monitoring systems, and investments in energy efficiency aim to minimize environmental impacts.

In line with its goal to support local employment and the regional economy in new operational areas, the Group prioritizes sourcing investments from the local workforce and supports this through education and development programs.

Investments to mitigate environmental impacts may lead to increased costs in the short term. However, these investments hold strategic importance in achieving long-term sustainability goals, ensuring compliance with relevant regulations, and enhancing social benefits. The Group addresses these trade-offs guided by the following principles:

- Although the payback period of the investment may be extended, full alignment with the Group's sustainability strategy, CareforNext, is ensured when environmental impacts are prioritized.

- When employment and social benefits are prioritized, compensatory measures (e.g., renewable energy use, treatment systems) are implemented to mitigate environmental impacts.



5. Risk Management

5. Risk Management

5.1. Identification and Monitoring of Climate-Related Risks

Within the Group, sustainability-related risks and opportunities are identified by the Sustainability Directorate and the Risk Management and Internal Audit Department and subsequently communicated to the relevant management bodies. Risks and opportunities identified within this scope are presented quarterly to the Sustainability Committees of the Board of Directors and the Executive Committee and integrated into senior-level decision-making processes. Furthermore, short-, medium-, and long-term risks associated with the Group's strategic plans are regularly communicated to senior management.

The identification and monitoring of climate-related risks and opportunities is carried out based on global, regional, and sectoral trends, alongside feedback from external and internal stakeholders, climate scenarios, and scientific data sources. This process is conducted in accordance with the TCFD recommendations and the TSRS framework. The analyses conducted encompass all Group operations and consider both acute and chronic physical risks, as well as transition risks and opportunities. The identification and assessment of climate-related risks within the Group incorporate both physical and transition risks. Physical risks are categorized into acute and chronic types, while transition risks are assessed based on uncertainties that may emerge in policy, market, technology, and regulatory domains. Within this scope, factors such as carbon pricing mechanisms, shifts in customer demands, requirements for transitioning to low-emission technologies, and potential litigation and compensation risks are monitored.

Analyses are carried out through quantitative and qualitative methods. In the analyses, the Group's internal analytical systems, physical risk databases provided by the World Resources Institute (WRI), and the IPCC's Shared Socioeconomic Pathways (SSPs) scenarios are utilized. In the analysis of climate-related risks, scenarios developed by the IPCC based on various projections are utilized. This facilitates anticipating potential impacts across various climate policy levels and supports strengthening the Group's resilience to climate risks.

5.2. Assessment and Prioritization of Climate Risks

Within the Group, climate risk assessment and prioritization are conducted through a comprehensive approach that includes both physical and transition risks. This process takes into account the impact and probability of risks, as well as their potential outcomes for the Group's operations.

In the assessment of physical risks, the contribution of facilities to overall turnover is considered as a parameter. Vulnerability functions specific to the type of facility (e.g., warehouse, industrial plant, office) are applied, taking into account each facility's contribution to the Group's turnover. These functions make it possible to forecast how long it would take for a facility to return to full operational capacity following a climate-related event. The assessments assume that physical events will occur independently and that the current facility portfolio will remain unchanged over the next five years.

Transition risk analyses consider factors such as regulatory changes driven by the low-carbon transition, technological requirements, market dynamics, and consumer preferences. During these analyses, balance sheet items such as carbon pricing, asset impairment projections, depreciation rates, and fossil fuel dependency are considered, along with financial impacts such as legal obligations and investor perception. The potential impacts of the Group's climate performance on its reputation are also incorporated into the assessment process. In addition, potential reputational risks stemming from climate activism are examined in relation to market conditions, consumer behavior, and sector-specific boycott scenarios.

The Sustainability Directorate coordinates the identification of climate-related and other ESG risks, both qualitatively and quantitatively, based on scenario analyses covering both physical and transition risks. Risk and opportunity analyses are regularly conducted by the relevant teams based on the inputs received and are subsequently presented to the Sustainability Executive Committee and the Board of Directors Sustainability Committee. In addition, risk analyses are communicated to the Board of Directors through the Early Detection of Risks Committee.

In addition to the comprehensive climate risk analyses carried out under the TCFD framework, material risks are assessed in accordance with the Group's Risk Assessment Guidelines. Sustainability and climate-related risks are included in the Group's Risk Catalog and are assessed and prioritized on an equal footing with conventional risks.

6. Metrics and Targets

6. Metrics and Targets

Overview

In line with the requirements of TSRS 1 and TSRS 2, entities are required to disclose their responses to climate-related risks and opportunities in a clear, comparable, and verifiable manner. Accordingly, entities are expected to disclose their sustainability and climate performance through quantitative metrics and measurable targets.

In line with the principles of transparency and accountability, the Group aims to provide comprehensive disclosures that meet stakeholder expectations and comply with TSRS requirements. The metrics used are systematically defined by considering the priorities and environmental and social impacts relevant to the Group's areas of operation; based on these metrics, targets reflecting measurable progress and tangible outcomes are established.

The Group collects data on the impacts of sustainability and climate-related risks and opportunities on its business decisions and operational results. The Group regularly reports on the impacts arising from its operations in accordance with the defined metrics. In the development of these metrics, internationally recognized standards, guidelines, and frameworks such as the GRI, SASB, and the GHG Protocol are referenced.

6.1. Sustainability and Climate-Related Targets

No changes or revisions have been made to the targets during the current reporting period. 2024 is designated as the base year for emission targets. Accordingly, disclosure of information on progress toward the targets is planned for future reporting periods.

The Group's greenhouse gas emissions target is established based on the "net emissions" approach. In line with the decarbonization strategy, complementary instruments such as carbon offset mechanisms and renewable energy certificates can be integrated alongside direct initiatives targeting emission reductions. This approach aims to mitigate the impact of local and sectoral constraints in the operational regions.

Climate / Sustainability	Type of Target	Description	Metric	Metric Unit	Target Objective	Base Year	Target Year	Progress Toward the Target
Climate	Quantitative	Carbon Neutrality (Scope 1, Scope 2 & Scope 3 emissions)	Scope 1, Scope 2 & Scope 3 emissions	tCO_2e	Reduction	2024	2050	-
Sustainability	Quantitative	Development of 53 MW Installed Renewable Energy Capacity	Installed Renewable Energy Capacity	MW	Adaptation	2020	2030	10 MWp
Sustainability	Quantitative	15% Reduction in Clean Water Consumption	Clean Water Consumption Intensity	m^3/gross ton	Reduction	2020	2030	27.7%
Sustainability	Quantitative	Use of 35% External Cullet in Glass Packaging	Amount of External Cullet in Glass Packaging	ton	Adaptation	-	2030	10.4%

6.1.1. Target Setting and Review Approach

Within the Group, sustainability targets are regarded as an integral component of the corporate strategy. The Group's sustainability and climate strategies are reviewed and updated in alignment with global megatrends, regulatory developments, sectoral expectations, and stakeholder feedback. Within the framework of strategy management led by the Sustainability Directorate, monitoring and advancement of the defined climate targets are conducted in integration with the Group's strategic decision-making mechanisms.

Within the scope of climate change mitigation efforts, the Group discloses its greenhouse gas emissions reduction targets in full alignment with the greenhouse gas emissions data presented in its corporate reports, encompassing Scope 1, Scope 2, and Scope 3 emissions. These data are independently verified and assured by a third party. Progress is overseen by senior management, while performance metrics such as energy consumption, use of cullet, and renewable energy share are reported quarterly to the Board of Directors. This reporting enables regular monitoring of progress toward the targets, with strategic actions taken as needed.

The identification and review of targets are subject to periodic reevaluation and updating in line with the Group's corporate strategy, international regulations, and sectoral decarbonization roadmaps.

6.1.2. Performance Against Climate Targets

Despite a 3.2% increase in total production volume (gross tons) compared to the previous year, Scope 1 emissions increased by 7.4%. However, the stable emission values per unit of production indicate that the increase in emissions per unit has remained limited, thanks to energy efficiency measures and process optimization efforts.

On the other hand, due to waste heat recovery initiatives, renewable energy investments, and improvements in the emission factors of the national electricity grid, the Group's location-based Scope 2 emissions decreased by 1.5% compared to the previous year. Furthermore, including the impact of green electricity supply certificates, an 8.5% reduction in market-based Scope 2 emissions was achieved.

Accordingly, the Group utilizes renewable energy certificates, such as I-REC and GO, to reduce its Scope 2 emissions. Apart from these certificates, the Group currently does not engage in the use of carbon credits in voluntary carbon markets.

6.2. Greenhouse Gases

6.2.1. Operational Greenhouse Gas (GHG) Emissions

Metric	Group Consolidated 2024 Performance	Architectural Glass	Industrial Glass	Glass Packaging	Glassware	Chemicals	Energy	Other*	Reference
Scope 1 Emissions (tCO_2e)	7,190,470	1,787,112	47,114	1,334,118	444,418	3,537,559	8,172	31,977	TSRS 2 29 (a) (i) GRI 305-1
Scope 2 Emissions (tCO_2e) – Location-Based	1,057,457	223,073	126,327	325,002	122,755	219,552	698	40,051	TSRS 2 29 (a) (i) GRI 305-2
Scope 2 Emissions (tCO_2e) – Market-Based	982,172	217,429	85,394	298,202	122,755	219,552	698	38,144	TSRS 2 29 (a) (i) GRI 305-2

*It encompasses companies operating in imports, exports, mining, recycling of glass, recycling of packaging waste, and non-hazardous waste; production and sales of cast AZS refractory blocks for glass production; holding company activities; as well as insurance brokerage services.

6.2.2. Value Chain-Related Greenhouse Gas Emissions

Metric	Group Consolidated* 2024 Performance	Reference
Scope 3 Emissions (tCO_2e)	5,321,739	TSRS 2 29 (a) (i) GRI 305-3
Category 1: Purchased Goods and Services	1,308,691	TSRS 2 29 (a) (i) GRI 305-3
Category 2: Capital Goods	138,702	TSRS 2 29 (a) (i) GRI 305-3
Category 3: Fuel and Energy-Related Activities	1,079,110	TSRS 2 29 (a) (i) GRI 305-3
Category 4: Upstream Transportation and Distribution	483,582	TSRS 2 29 (a) (i) GRI 305-3
Category 5: Waste Generated in Operations	193,963	TSRS 2 29 (a) (i) GRI 305-3
Category 6: Business Travel	2,416	TSRS 2 29 (a) (i) GRI 305-3

Metric	Group Consolidated* 2024 Performance	Reference
Category 7: Employee Commuting	20,198	TSRS 2 29 (a) (i) GRI 305-3
Category 9: Downstream Transportation and Distribution	266,195	TSRS 2 29 (a) (i) GRI 305-3
Category 11: Use of Sold Products	1,358,223	TSRS 2 29 (a) (i) GRI 305-3
Category 12: End-of-Life Treatment of Sold Products	40,991	TSRS 2 29 (a) (i) GRI 305-3
Category 14: Franchises	3,201	TSRS 2 29 (a) (i) GRI 305-3
Category 15: Investments	426,467	TSRS 2 29 (a) (i) GRI 305-3

*It includes data on operations in architectural glass, industrial glass, glass packaging, glassware, chemicals, energy, and other business segments.

6.3. Greenhouse Gas Emissions Calculation Methodology

6.3.1. Calculation Approach

The Group's Scope 1 and Scope 2 greenhouse gas emissions were calculated using the operational control approach in accordance with the GHG Protocol: Corporate Accounting and Reporting Standard (2004). This methodology assumes that the Group is accountable for reporting direct emissions from production activities under its operational control and indirect emissions associated with purchased electricity consumption. Scope 1 and Scope 2 greenhouse gas emissions are calculated using information obtained from the Group's internal and external data sources. Data quality and measurement uncertainties are taken into account during the calculation process. No changes were made to the scope during the reporting period. The calculation scope is detailed under TSRS 2, section 29(a)(iii).

Value chain-related indirect emissions are calculated in accordance with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011). Scope 3 greenhouse gas emissions are classified into 15 categories, which are grouped into two main segments: upstream and downstream emissions:

- Upstream emissions encompass indirect GHG emissions from goods and services purchased by the organization throughout the supply chain and are classified into 8 distinct categories.
- Downstream emissions refer to emissions arising from the use and disposal of goods and services produced by the organization after they have been delivered to customers and are classified into 7 categories.

Emission calculations include the Group's data. Emission factors used in the inventory preparation have been selected from the following international sources, aligned with the relevant emission scope:

Scope 1 Emissions (Direct Emissions)

- IPCC AR6 (Intergovernmental Panel on Climate Change – Sixth Assessment Report) Emission Factors

Scope 2 Emissions (Location-Based Indirect Emissions – Electricity Consumption)

- IEA (International Energy Agency) 2024 Emission Factors

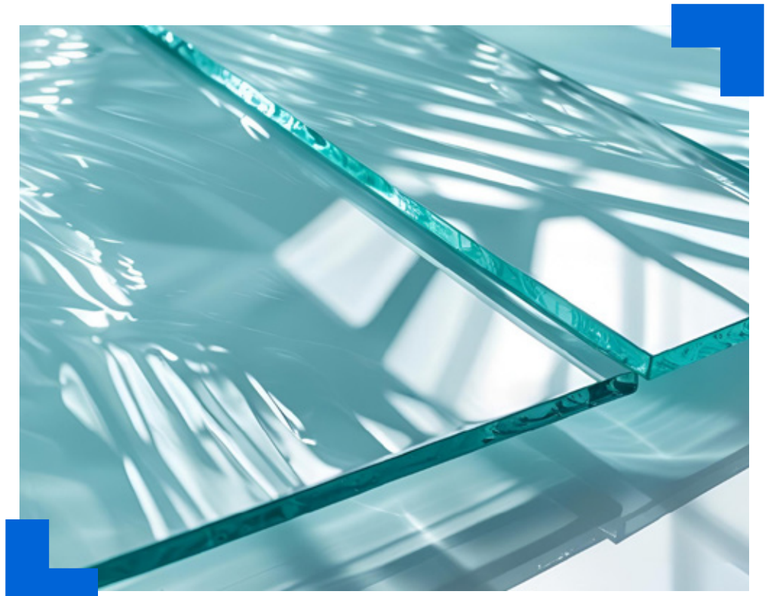
Scope 3 Emissions (Value Chain Emissions)

- DEFRA (UK Department for Environment, Food and Rural Affairs) database
- Ecoinvent 3.10 database
- EPA (U.S. Environmental Protection Agency) and EPD (Environmental Product Declarations) guidelines

6.3.2. Challenges Faced in Emissions Measurement and Measurement Uncertainty

In measuring Scope 1 and Scope 2 emissions, the Group's multi-plant structure, diversity of operational data, and manual data collection practices extend and complicate data verification, control, and consolidation processes.

For Scope 3 emissions, the extensive value chain spanning business functions such as supply chain, logistics, and procurement; dispersed data ownership; diverse data monitoring infrastructures; numerous activity data stored across independent systems; and varying unit calculation methods complicate the establishment of a centralized and consistent data management system.



6.4. Sector- and Group-Specific Metrics

6.4.1. Production

Metric		Architectural Glass	Industrial Glass	Glass Packaging	Glassware	Chemicals	Energy	Other**	Reference
Production Volume	Gross*	3,256,764	75,261 tons and 13,470,678 m^2	2,933,037	443,058	4,510,988	771,924,798	4,557,968	SASB: EM-CM-130a.1 GRI 301-1
	Net*	2,818,380	63,652 tons and 13,470,678 m^2	2,505,498	311,706	4,510,988	771,924,798	4,557,968	SASB: EM-CM-130a.1 GRI 301-1

* Glass and chemicals are reported in tons; glass fiber within the industrial glass category is also reported in tons; automotive glass is reported in square meters (m^2); and energy is reported in kilowatt-hours (kWh).
** It encompasses companies operating in imports, exports, mining, recycling of glass, recycling of packaging waste, and non-hazardous waste; production and sales of cast AZS refractory blocks for glass production; holding company activities; as well as insurance brokerage services.

Metric	Architectural Glass	Industrial Glass**	Glass Packaging	Glassware	Chemicals	Energy***	Other****	Reference
Scope 1 Emissions Intensity * (tons CO_2/gross ton)	0.55	-	0.45	1.00	0.78	-	0.01	GRI 305-4
Scope 2 Emissions Intensity, Location-Based* (tons CO_2/gross ton)	0.07	-	0.11	0.28	0.05	-	0.01	GRI 305-4
Scope 2 Emissions Intensity, Market-Based* (tons CO_2/gross ton)	0.07	-	0.10	0.28	0.05	-	0.01	GRI 305-4

* Provided in business units
** Glass fiber in the industrial glass category is reported in tons; automotive glass is reported in square meters (m^2). Emissions intensity data have not been reported for this group due to differences in measurement units.
*** Emissions intensity data have not been reported for this group as electricity generation is monitored in energy units (kWh).
**** It encompasses companies operating in imports, exports, mining, recycling of glass, recycling of packaging waste, and non-hazardous waste; production and sales of cast AZS refractory blocks for glass production; holding company activities; as well as insurance brokerage services.

6.4.2. Energy Management

Metric	Group Consolidated 2024 Performance	Architectural Glass	Industrial Glass	Glass Packaging	Glassware	Chemicals	Energy	Other*	Reference
Total Energy Consumption (GJ)	90,787,121	23,800,419	1,876,259	19,006,120	7,031,092	33,524,634	4,758,402	790,195	SASB: EM-CM-130a.1
Natural gas	65,540,005	21,456,982	722,953	15,892,138	5,896,641	16,468,677	4,752,459	350,155	GRI 302-1
Coal	13,469,527	-	-	-	-	13,469,527	-	-	GRI 302-1
LPG	357,541	286,969	1,828	22,821	45,923	-	-	-	GRI 302-1
Diesel	175,597	46,886	873	76	3,811	39,637	-	84,314	GRI 302-1
Other	39,100	-	-	-	39,100	-	-	-	GRI 302-1
By Electricity Sources (GJ)	11,205,351	2,009,582	1,150,605	3,091,085	1,045,617	3,546,793	5,943	355,726	GRI 302-2
Grid	9,400,158	1,863,948	1,150,605	3,057,093	1,045,617	1,921,564	5,943	355,388	SASB: EM-CM-130a.1
Renewable	18,610	18,272	-	-	-	-	-	338	SASB: EM-CM-130a.1
Recovered Energy	1,786,584	127,362	-	33,992	-	1,625,229	-	-	
Renewable Energy Certificates	663,956	64,959	348,739	228,305	-	-	-	21,953	
Specific Energy Consumption (GJ/Gross ton)	**.	7.31	-	6.48	15.87	7.43	-	0.17	SASB: EM-CM-130a.1

* It encompasses companies operating in imports, exports, mining, recycling of glass, recycling of packaging waste, and non-hazardous waste; production and sales of cast AZS refractory blocks for glass production; holding company activities; as well as insurance brokerage services
** Provided in business units

6.4.3. Water Management

Metric	Group Consolidated 2024 Performance	Architectural Glass	Industrial Glass	Glass Packaging	Glassware	Chemicals	Energy	Other*	Reference
Total Water Withdrawal by Source (m³)	53,602,391	2,982,496	1,423,155	1,960,773	1,305,857	44,992,467	82,395	855,248	SASB: EM-CM-140a.1 GRI 303-3
Municipal Water	3,016,883	323,901	793,116	608,699	953,401	46,266	-	291,500	GRI 303-3
Surface Water	24,243,284	1,003,721	-	8,071	-	22,891,870	-	339,623	GRI 303-3
Groundwater	26,097,895	1,412,014	629,889	1,344,003	352,456	22,054,331	82,395	222,807	GRI 303-3
Other	244,328	242,860	150	-	-	-	-	1,318	GRI 303-3

*It encompasses companies operating in imports, exports, mining, recycling of glass, recycling of packaging waste, and non-hazardous waste; production and sales of cast AZS refractory blocks for glass production; holding company activities; as well as insurance brokerage services.

6.4.4. Materials

Metric	Group Consolidated 2024 Performance	Architectural Glass	Industrial Glass	Glass Packaging	Glassware	Chemicals	Energy	Other*	Reference
Amount of Cullet Used in Glass Production (tons)	1,447,040	546,935	7,907	743,314	148,883	-	-	-	GRI 301-1
Internal Cullet	1,115,812	525,216	7,907	438,302	144,387	-	-	-	GRI 301-1
External Cullet	331,228	21,719	-	305,012	4,497	-	-	-	GRI 301-1

*It encompasses companies operating in imports, exports, mining, recycling of glass, recycling of packaging waste, and non-hazardous waste; production and sales of cast AZS refractory blocks for glass production; holding company activities; as well as insurance brokerage services.

7. Annexes

7. Annexes

7.1. Calculation Principles for Metrics

General Reporting Principles

The Calculation Principles for Metrics ("Calculation Principles") provide information on the preparation, calculation, and reporting methodologies for the performance metrics data included in the Şişecam 2024 TSRS-Compliant Report, which are within the scope of the limited assurance audit, covering in Türkiye Şişe ve Cam Fabrikaları A.Ş. and its subsidiaries (collectively, the "Group").

These metrics include environmental metrics. It is the responsibility of the Group's management to ensure that appropriate procedures have been implemented for the preparation of the metrics defined below, in accordance with the Calculation Principles, in all material respects.

The information contained in these principles covers the 2024 financial year (January 1, 2024 – December 31, 2024), ending on December 31, 2024, and the Group's relevant operations in Türkiye and abroad, as detailed in the section titled Key Definitions and Reporting Scope. The data included in the "Scope 1 Emissions (Group)" and "Scope 2 Emissions (Group)" metrics within the environmental metrics covered by these principles comprise information from Türkiye Şişe ve Cam Fabrikaları A.Ş. and its subsidiaries listed below.

The following principles have been taken into consideration in the preparation of this guideline document:

- Emphasizing the fundamental principles of relevance and reliability in the preparation of information; and
- Emphasizing the principles of comparability and consistency with other data, including prior year data, as well as clarity and transparency in the reporting of information.

Key Definitions and Reporting Scope

Type	Metric	Scope
Environmental Metrics	Scope 1 Emissions (tCO_2e)	These constitute emissions arising from production operations that were under the direct operational control of Şişecam during the reporting period. Emission calculations are based on activity data derived from the consumption of fossil fuels and carbonate-containing raw materials. The Group calculates its greenhouse gas emissions in accordance with the 'Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard (GHG Protocol, 2004)'.
	Scope 2 Emissions (tCO_2e) – Location-Based	These represent greenhouse gas emissions from electricity consumption monitored through invoices issued by Şişecam's service providers during the reporting period. The Group calculates its greenhouse gas emissions in accordance with the 'Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard (GHG Protocol, 2004)'.
	Scope 2 Emissions (tCO_2e) – Market-Based	These represent market-based indirect greenhouse gas emissions, calculated by subtracting the amount of purchased renewable energy (I-RECs) from the Group's indirect GHG emissions resulting from grid electricity consumption during the reporting period. The Group calculates its greenhouse gas emissions in accordance with the 'Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard (GHG Protocol, 2004)'.
	Scope 3 Emissions (tCO_2e)	These represent emissions arising from activities across the value chain that are not in the scope of the Group's direct control during the reporting period. These emissions arise from activities such as purchased goods and services, use of capital goods, indirect activities related to fuel and energy, transportation and distribution during procurement, disposal of waste generated in operations, as well as emissions from employee business travel, shuttle services, and commuting. In addition, this scope also includes emissions from transportation and distribution after the delivery of products to customers, the use of sold products and their end-of-life disposal, as well as emissions from the Group's franchises and investee companies.

Type	Metric	Scope
Environmental Metrics	Scope 3 – Category 1: Purchased Goods and Services	This covers energy consumption and carbon footprint-related GHG emissions arising from raw and production materials from direct purchases, which are directly used in the Group's production processes, as well as emissions resulting from the production and processing of indirect procurement consisting of products and services that support the entity's operations but are not directly involved in the production process during the reporting period.
	Scope 3 – Category 2: Capital Goods	This covers indirect GHG emissions resulting from capital goods (e.g., machinery and equipment, buildings, land and land improvements, vehicles, and fixtures) directly used by the Group in its owned production processes, service delivery, and operations. Fixed asset purchases in 2024, covering all facilities, have been calculated using an expenditure-based methodology based on their financial values as reported in the financial statements. EPA v1.3 data have been used as emission factors. For companies operating in Türkiye, the USD/TL exchange rate as of December 31, 2024 (22.79) was used, while for companies operating in other countries, the average USD/TL exchange rate for the period (32.51) was applied. Inflation accounting was applied as of year-end for companies operating in Türkiye.
	Scope 3 – Category 3: Fuel and Energy-Related Activities	Regarding energy and fuel consumption calculated for Scope 1 and Scope 2 activities, emissions from the well-to-tank (WTT) process were calculated for fuels, and emissions from transmission and distribution (T&D) losses were calculated for electricity. Electricity and fuel consumption data were sourced from Şişecam. T&D loss emission factors were determined using the 2023 version of the IEA database, based on the country-specific data corresponding to the location of the relevant plant. WTT emission factors were determined using the latest 2024 DEFRA dataset for each fuel type.
	Scope 3 – Category 4: Upstream Transportation and Distribution	Emissions arising from the transportation of raw materials used in production and packaging materials to the facilities are classified under upstream transportation prior to production. According to the GHG Protocol, the criteria that defines the boundary for upstream distribution prior to production is the financial control over freight costs. When freight costs are covered by the reporting Group, the related distribution activities are classified under upstream distribution. Conversely, when freight costs are not covered by the Group, these transportation activities are classified under downstream transportation and distribution after production. Emission categories have been defined based on delivery terms (Incoterms) as follows: • EXW, FCA, FAS, FOB → Downstream Transportation and Distribution • CPT, CFR, CIF, CIP, DAP, DPU, DDP → Upstream Transportation and Distribution In the calculations, DEFRA 2024 emission factors corresponding to each mode of transportation (road, sea, air, and rail) were used. Emissions were calculated using the functional unit of ton × kilometer (ton·km). Distance data: • For road transportation: Google Maps • For transportation by sea: sea-distances.org • For airline transport: airportdistancecalculator.com • For rail transportation: Estimated based on route mapping via Google Maps. For sea freight consignments without specified port information, the most commonly used commercial port of the relevant country was assumed as the point of arrival. For sea freight shipments to countries without a port, the port of the nearest country was taken as the point of arrival, and the remaining distance was calculated based on road transport. Emissions related to this remaining distance were accounted for under road transportation. When vehicle capacity by mode of transportation could not be determined, the average transportation capacity from the relevant dataset was used as the basis. Additionally, transports classified as "sea freight — other" were assumed within the product tanker category.

Type	Metric	Scope
Environmental Metrics	Scope 3 – Category 5: Waste Generated in Operations	GHG emissions arising from waste and wastewater disposal, as well as emissions from their transportation to disposal facilities, have been included in the calculations for all plants' operational activities. In addition, emissions from treatment processes undergone by water supplied from the mains prior to its use have also been included within the scope. Well water, on the other hand, was excluded from the system boundaries as it is of a quality that does not require treatment. Based on the assumption that waste is transported to disposal facilities, emissions related to such transportation were included in the calculations. Waste types were categorized according to the DEFRA 2024 dataset classification and matched with the corresponding emission factors. The emission factor for mains water supply was also obtained from the DEFRA 2024 dataset. Emissions from waste transfer have been calculated using the functional unit of ton × kilometer (ton·km) and emission factors specific to each type of transport vehicle.
	Scope 3 – Category 6: Business Travel	This covers GHG emissions arising from flights, train journeys, taxi rides, public transportation, and accommodation related to Group employees' business travel. During emission calculations, the number of trips for each single journey is calculated separately and then summed. ◆ Train journeys were calculated based on equivalent road distances, and DEFRA emission factors were applied. ◆ Hotel accommodations were calculated based on the number of nights and country-specific DEFRA emission factors. ◆ Flight distances were determined based on the distance between airports and multiplied by DEFRA emission factors, taking into account the flight class (Economy/First Class) and flight distance category.
	Scope 3 – Category 7: Employee Commuting	This covers GHG emissions arising from the use of shuttle service vehicles, rented vehicles, and employees' personal vehicles for commuting and transportation purposes. Data on employee transportation has been evaluated based on either distance traveled or fuel consumption, depending on the vehicle type retrieved from the system. Total fuel consumption was calculated using hypothetical fuel consumption values determined by vehicle type, and emissions—including WTT—were calculated using IPCC emission factors. Emissions from shuttle service vehicles, rented vehicles, and company vehicles were included in the calculations; however, rented and company vehicles falling under Scope 1 were excluded, and only emissions from shuttle service vehicles were assessed under Scope 3. Calculations were made based on kilometers for shuttle service vehicles and on liters for other vehicles, in line with the available data format.
	Scope 3 – Category 9: Downstream Transportation and Distribution	This covers GHG emissions arising from the export of products manufactured by the Group, their distribution to local procurement centers, and retail sales. Delivery operations are carried out via sea, air, rail, and road transport. These emissions were calculated using the same method as those applied to Category 4.
	Scope 3 – Category 11: Use of Sold Products	GHG emission calculations related to the use phase by end users of products sold by the Group are based on sales data for flat glass, automotive glass, glass fiber, glass packaging, glassware, chromium, soda ash, and Oxyvit. Emissions were calculated considering the inputs required during the use of these products.
	Scope 3 – Category 12: End-of-Life Treatment of Sold Products	Sales data for glass, soda ash, chromium sulfate, and refractory products sold by the Group form the basis of the calculations. It is assumed that products other than chemicals are recycled, while chemical products are disposed of as industrial waste.

Type	Metric	Scope
	Scope 3 – Category 14: Franchises	Emissions from energy consumption at the Group's stores are addressed under this category. The total annual electricity consumption of the stores was obtained and multiplied by the IEA 2023 emission factors to calculate emissions. Additionally, total water consumption was assessed using the water supply emission factor based on DEFRA data.
	Scope 3 – Category 15: Investments	It is calculated by aggregating the direct emissions (Scope 1 and Scope 2) of entities in which the Group has invested, based on the ownership share (i.e., equity interest). Scope 1 and Scope 2 emissions of Saint Gobain Glass Egypt S.A.E., Saint Gobain Egypt for Glass Industries S.A.E., Saint Gobain Trade Egypt, Saint Gobain Mirrors Egypt, Solvay Sisecam Holding AG, and Solvay Sodi AD were included in the calculations in proportion to the Group's equity share.
	Total Water Withdrawal by Source (m^3)	It refers to the total amount of water withdrawn during the reporting period, as monitored through invoices from the Group's service providers, procurement tanker records, and meter readings. The data covers all Şişecam production plants.
	Municipal Water	It refers to the amount of mains water withdrawn during the reporting period, monitored through invoices issued by the Group's service providers.
	Surface Water	It refers to the amount of surface water withdrawn during the reporting period, monitored through invoices issued by the Group's service providers.
	Groundwater	It refers to the amount of groundwater withdrawn during the reporting period, monitored through invoices issued by the Group's service providers.
	Other	It refers to the amount of water withdrawn by the Group from sources other than mains water, surface water, and groundwater during the reporting period.
Environmental Metrics	**Clean Water Consumption Intensity (m^3/gross ton)**	This is calculated by dividing the Group's total clean water consumption by the gross tonnage of production during the reporting period.
	Production Volume – Gross (ton)	It refers to the Group's total gross production volume during the reporting period. Gross production refers to the total volume produced before accounting for losses or waste generated during the production process.
	Production Volume – Net (ton)	It refers to the Group's total net production volume during the reporting period. Net production refers to the actual product volume that meets applicable quality standards and is ready for sale or further processing.
	Scope 1 Emissions Intensity (tons CO_2/gross ton)	This is calculated by dividing the Group's emissions from production operations under its direct operational control by the gross tonnage of production during the reporting period.
	Scope 2 Emissions Intensity, Location-Based (tons CO_2/gross ton)	This is calculated by dividing the GHG emissions from electricity consumption, monitored through invoices from the Group's service providers during the reporting period, by the gross tonnage of production for the same period.
	Scope 2 Emissions Intensity, Market-Based (tons CO_2/gross ton)	This is calculated by dividing the market-based indirect GHG emissions—determined by subtracting the amount of purchased renewable energy (I-RECs) from the Group's indirect GHG emissions resulting from grid electricity consumption during the reporting period—by the gross tonnage of production for the same period.
	Total Energy Consumption (GJ)	It refers to the total energy consumption during the reporting period for the Group's production operations. Among the available energy resources, this scope includes primary sources such as natural gas, coal, and LPG used in the facilities. Electricity consumption within this scope includes both purchased electricity and electricity generated on-site. Electricity consumption from renewable sources and from the grid are monitored separately. Total energy consumption is reported in gigajoules (GJ) on a consolidated basis. All geographical locations and production sites are included within this scope.

Type	Metric	Scope
Environmental Metrics	Natural gas	It refers to natural gas consumption during the reporting period, as monitored through invoices from the Group's service providers.
	Coal	It refers to the consumption amount of coal purchased and monitored by the Group during the reporting period for use in its production operations.
	LPG	It refers to the consumption amount of LPG purchased and monitored by the Group during the reporting period for use in its production operations.
	Diesel	It refers to the consumption amount of diesel during the reporting period, monitored through invoices from the Group's third-party service providers.
	Other	It refers to the consumption amount of other energy resources used during the reporting period for the Group's production operations.
	Total Consumption by Electricity Source (GJ)	It covers electricity consumption from both purchased electricity and electricity generated on-site during the reporting period. Electricity consumption from renewable sources and the grid are monitored separately, with total electricity consumption reported in gigajoules (GJ). All geographical locations and production sites are included within this scope.
	Grid	It refers to the grid electricity consumption during the reporting period, purchased by the Group and monitored through invoices from service providers. All geographical locations and production sites are included within this scope.
	Renewable	It covers electricity consumption from renewable energy generated on-site during the reporting period. All geographical locations and production sites are included within this scope.
	Recovered Energy	It refers to energy recovered from waste heat, gas, or mechanical energy generated by plant operations and reused in another process during the reporting period. All geographical locations and production sites are included within this scope.
	Renewable Energy Certificates	It refers to the verified amount of energy certifying that the electricity consumed by the Group during the reporting period was generated from renewable energy sources. (Within this scope, the Group purchases I-RECs.)
	Specific Energy Consumption (GJ/Gross ton)	It is calculated as the ratio of total energy consumption to the total gross production volume (in tons) for the same period. It is calculated only for architectural glass, glass packaging, glassware, chemicals, and other business segments.
	Installed Renewable Energy Capacity (MW)	It refers to the Group's installed renewable energy capacity during the reporting period.
	Amount of Cullet Used in Glass Production (tons)	It refers to the total weight of recycled cullet from production and post-use sources that were reused by the Group in its production processes during the reporting period.
	Internal Cullet	It refers to the total weight of internal cullet from production and post-use sources that were reused by the Group in its production processes during the reporting period.
	External Cullet	It refers to the total weight of external cullet from production and post-use sources that were reused by the Group in its production processes during the reporting period.
	Amount of External Cullet in Glass Packaging (tons)	It refers to the amount of external cullet used by the Group in glass packaging production during the reporting period.

Data Compilation

1. Environmental Metrics

Energy Consumption (GJ)

Energy consumption refers to the amount of energy generated from the energy sources used across all Şişecam locations. These energy sources include electricity (kWh)—from the grid, renewable sources, and recovered energy—natural gas (kWh), diesel (L), LPG (kg), coal (steam coal, lignite) (ton), gasoline (L), and other (C43, acetylene).

The Group uses the following conversion factors and calorific values to convert the fuels included in energy consumption into gigajoules (GJ).

Specific Energy Consumption (GJ/Gross ton)

Total Energy Consumption (GJ) / Production Volume – Gross (ton)

Energy Source	Calorific Value	Unit	References	Factor (kcal → TEP)	Factor (TEP → GJ)
Natural gas	8,250	kcal/ Sm^3	Lower Heating Values and Oil Equivalent Conversion Factors of Energy Sources Annex-2	$10^{(-7)}$	41.868
Diesel	10,200	kcal/kg		$10^{(-7)}$	41.868
LPG	10,900	kcal/kg		$10^{(-7)}$	41.868
Steam Coal	6,000	kcal/kg	Supplier's Measurement Value / Purchase Contracts	$10^{(-7)}$	41.868
Lignite	2,627	kcal/kg		$10^{(-7)}$	41.868
Acetylene	48	TJ / Gg	IPCC_AR6	-	-
C43 (Propylene)	46.4	TJ / Gg	IPCC_AR6	-	-
Propylene	46.02	TJ / Gg	IPCC_AR6	-	-

Scope 1 Emissions (tCO_2e)

Scope 1 emissions calculations include direct GHG emissions arising from the use of natural gas, diesel, gasoline, and LPG, as well as from process-related chemicals such as Na_2CO_3 (sodium carbonate), $CaCO_3$ (limestone), $CaMg(CO_3)_2$ (dolomite), anthracite, acetylene, and C43 (propylene). Emissions from mobile combustion sources (plant vehicles) and chemical sources such as refrigerant gases and fire extinguishers are also included.

Formula:

Emissions = Activity Data × Emission Factor × Oxidation Factor
Activity Data = Consumption × Net Calorific Value (TJ)

Oxidation Factor = 1

GWP factors from the IPCC Sixth Assessment Report (AR6) were applied, and the total tCO_2e value was calculated by multiplying with the respective factors.

Scope 1 Emissions Intensity* (tons CO_2/gross ton)

Formula:

Scope 1 Emissions (tCO_2e) / Production Volume – Gross (ton)

Scope 2 Emissions Intensity, Location-Based (tons CO_2/gross ton)

Formula:

Scope 2 Emissions (tCO_2e) – Location-Based / Production Volume – Gross (ton)

Scope 2 Emissions Intensity, Market-Based (tons CO_2/gross ton)

Formula:

Scope 2 Emissions (tCO_2e) – Market-Based / Production Volume – Gross (ton)

Emission Source	Emission Source Unit	Emission Factor				References
		CO_2 ($kgCO_2$/TJ)	CH_4 ($kgCO_2$/TJ)	N_2O ($kgCO_2$/TJ)	CO_2e (metric ton)	
Natural Gas	Terajoule (TJ)	56.1	0.001	0.0001	56.1548	IPCC Sixth Assessment Report (AR6)
LPG	Terajoule (TJ)	63.1	0.001	0.0001	63.1548	IPCC Sixth Assessment Report (AR6)
Steam Coal	Terajoule (TJ)	94.6	0.01	0.0015	95.297	IPCC Sixth Assessment Report (AR6)
Diesel	Terajoule (TJ)	74.1	0.003	0.0006	74.3538	IPCC Sixth Assessment Report (AR6)
Acetylene	Terajoule (TJ)	70.4	0.005	0.0006	70.4	IPCC Sixth Assessment Report (AR6)
C43 (Propylene)	Terajoule (TJ)	69.3	0.003	0.0006	69.3	IPCC Sixth Assessment Report (AR6)
LNG	Terajoule (TJ)	64.2	0.003	0.0006	64.4538	IPCC Sixth Assessment Report (AR6)
Propylene	Terajoule (TJ)	68.15	0.003	0.0006	68.4038	IPCC Sixth Assessment Report (AR6)
Lignite	Terajoule (TJ)	96.1	0.003	0.001	96.1	IPCC Sixth Assessment Report (AR6)
Anthracite	Terajoule (TJ)	98.3	0.01	0.0015	98.3	IPCC Sixth Assessment Report (AR6)
Limestone	Metric ton	0.44	-	-	0.4397	IPCC (2006) Vol 3, Chapter 2, Table 2.1
Magnesium Carbonate	Metric ton	0.52	-	-	0.524	IPCC (2006) Vol 3, Chapter 2, Table 2.1
Sodium Carbonate	Metric ton	0.41	-	-	0.4149	IPCC (2006) Vol 3, Chapter 2, Table 2.1
Dolomite	Metric ton	0.48	-	-	0.4773	IPCC (2006) Vol 3, Chapter 2, Table 2.1
Barium Carbonate	Metric ton	0.22	-	-	0.223	IPCC Sixth Assessment Report (AR6)
Lithium Carbonate	Metric ton	0.6	-	-	0.595	IPCC Sixth Assessment Report (AR6)
Potassium Carbonate	Metric ton	0.32	-	-	0.318	IPCC Sixth Assessment Report (AR6)
Strontium Carbonate	Metric ton	0.3	-	-	0.297	IPCC Sixth Assessment Report (AR6)
Sodium bicarbonate	Metric ton	0.26	-	-	0.262	IPCC Sixth Assessment Report (AR6)

Scope 2 Emissions (tCO_2e)

Scope 2 emissions calculations include indirect GHG emissions resulting from the Group's electricity consumption. CO_2 emissions from electricity consumption cover the consumption at all Şişecam locations.

Formula:

Emissions = Activity Data × Emission Factor

For Scope 2 emissions calculations, country-specific fuel-based emission factors have been applied, based on the International Energy Agency (IEA) 2024 data.

Source:
https://www.iea.org/data-and-statistics/data-product/emissions-factors-2024#emission-factors

https://iea.blob.core.windows.net/assets/adcb9ea4-fc85-4379-826f-bbdd57401fa5/IEA_Methodology_Emission_Factors_2024.pdf

Scope 3 Emissions (tCO_2e)

The Group's Scope 3 emissions cover greenhouse gas emissions arising from the organization's activities, which are not directly controlled by the organization, and are in the scope of the following Categories in accordance with the GHG Protocol.

- Category 1: Purchased Goods and Services
- Category 2: Capital Goods owned and utilized by the Group
- Category 3: Fuel and Energy-Related Activities
- Category 4: Upstream Transportation and Distribution
- Category 5: Disposal of waste generated through the Group's operations
- Category 6: Business travel of the Group's Employees
- Category 7: Emissions from Employee Shuttle Services and Commuting
- Category 9: Downstream Transportation and Distribution
- Category 11: Use of Sold Products
- Category 12: End-of-life treatment and disposal of sold products of the Group
- Category 14: Emissions from Franchise Operations
- Category 15: Emissions arising from entities in which the Group has invested.

The emission factors, units, and references used in the emissions calculations are specified in the "Scope 3 Categories" table.

Formula:

Emissions = Activity Data × Emission Factor

Category 1: Purchased Goods and Services

This covers energy consumption and carbon footprint-related GHG emissions arising from raw and production materials from direct purchases, which are directly used in the Group's production processes, as well as emissions resulting from the production and processing of indirect procurement consisting of products and services that support the entity's operations but are not directly involved in the production process during the reporting period.

$$\text{For expenditure-based data} \rightarrow tCO_2e: = \frac{\text{Financial Value of the Product (2022 USD)} \times \text{Emission Factor} \left(\frac{kgCO_2e}{\text{Unit Financial value (2022 USD)}}\right)}{1000}$$

$$\text{For activity-based data} \rightarrow tCO_2e: = \frac{\text{Activity Data of the Product (units,tons,etc.)} \times \text{Emission Factor} \left(\frac{kgCO_2e}{\text{Unit Product Quantity (units,tons,etc.)}}\right)}{1000}$$

Category 2: Capital Goods Owned and Utilized by the Group

This covers indirect GHG emissions resulting from capital goods (e.g., machinery and equipment, buildings, land and land improvements, vehicles, and fixtures) directly used by the Group in its owned production processes, service delivery, and operations.

Fixed asset purchases in 2024, covering all facilities, have been calculated using an expenditure-based methodology based on their financial values as reported in the financial statements. EPA v1.3 data have been used as emission factors. For companies operating in Türkiye, the USD/TL exchange rate as of December 31, 2024 (22.79) was used, while for companies operating in other countries, the average USD/TL exchange rate for the period (32.51) was applied. Inflation accounting was applied as of year-end for companies operating in Türkiye.

$$tCO_2e: = \frac{\text{Financial Value of the Fixed Asset (2022 USD)} \times \text{Emission Factor} \left(\frac{kgCO_2e}{\text{Unit Financial value (2022 USD)}}\right)}{1000}$$

Category 3: Fuel and Energy-Related Activities

Regarding energy and fuel consumption calculated for Scope 1 and Scope 2 activities, emissions from the well-to-tank (WTT) process were calculated for fuels, and emissions from transmission and distribution (T&D) losses were calculated for electricity. Electricity and fuel consumption data were sourced from Şişecam. T&D loss emission factors were determined using the 2023 version of the IEA database, based on the country-specific data corresponding to the location of the relevant plant. WTT emission factors were determined using the latest 2024 DEFRA dataset for each fuel type.

$$tCO_2e = \frac{\text{Fuel or Energy Consumption Value } (m^3, kWh, tons) \times \text{Emission Factor } \left(\frac{kgCO_2e}{\text{Fuel Quantity } (m^3, kWh, tons)}\right)}{1000}$$

Category 4: Upstream Transportation and Distribution

Emissions arising from the transportation of raw materials used in production and packaging materials to the facilities are classified under upstream transportation prior to production.

According to the GHG Protocol, the criterion that defines the boundary for upstream distribution prior to production is financial control over freight costs. When freight costs are covered by the reporting Group, the related distribution activities are classified under upstream distribution. Conversely, when freight costs are not covered by the Group, these transportation activities are classified under downstream transportation and distribution after production.

Emission categories have been defined based on delivery terms (Incoterms) as follows:

- EXW, FCA, FAS, FOB → Downstream Transportation and Distribution
- CPT, CFR, CIF, CIP, DAP, DPU, DDP → Upstream Transportation and Distribution

In the calculations, DEFRA 2024 emission factors corresponding to each mode of transportation (road, sea, air, and rail) were used. Emissions were calculated using the functional unit of ton × kilometer (ton·km).

Distance data:

- For road transportation: Google Maps
- For transportation by sea: sea-distances.org
- For airline transport: airportdistancecalculator.com
- For rail transportation: Estimated based on route mapping via Google Maps.

For sea freight consignments without specified port information, the most commonly used commercial port of the relevant country was assumed as the point of arrival. For sea freight shipments to countries without a port, the port of the nearest country was taken as the point of arrival, and the remaining distance was calculated based on road transport. Emissions related to this remaining distance were accounted for under road transportation.

When vehicle capacity by mode of transportation could not be determined, the average transportation capacity from the relevant dataset was used as the basis. Additionally, transports classified as "sea freight – other" were assumed to be in the scope of the product tanker category.

$$tCO_2e = \frac{\text{Unit Load Transfer per Unit Distance } (ton \times km) \times \text{Mode of Transportation Emission Factor } \left(\frac{kgCO_2e}{\text{Load Transfer } (ton \times km)}\right)}{1000}$$

Category 5: Disposal and Recycling of Waste Generated from the Group's Operations

GHG emissions arising from waste and wastewater disposal, as well as emissions from their transportation to disposal facilities, have been included in the calculations for all plants' operational activities. In addition, emissions from treatment processes undergone by water supplied from the mains prior to its use have also been included within the scope.

Well water, on the other hand, was excluded from the system boundaries as it is of a quality that does not require treatment. Based on the assumption that waste is transported to disposal facilities, emissions related to such transportation were included in the calculations. Waste types were categorized according to the DEFRA 2024 dataset classification and matched with the corresponding emission factors. The emission factor for mains water supply was also obtained from the DEFRA 2024 dataset.

Emissions from waste transfer have been calculated using the functional unit of ton × kilometer (ton·km) and emission factors specific to each type of transport vehicle.

$$\text{For the Disposal of Production Waste} \rightarrow tCO_2e = \frac{\text{Waste quantity (ton)} \times \text{Emission Factor by Waste Type and Disposal Method } \left(\frac{kgCO_2e}{\text{Waste Quantity (ton)}}\right)}{1000}$$

For the Disposal of Wastewater → tCO_2e: =

$$\frac{\text{Wastewater Volume } (m^3) \times \text{Disposal of Wastewater Emission Factor } \left(\frac{kgCO_2e}{\text{Wastewater Volume } (m^3)}\right)}{1000}$$

For the Mains Water Supply → tCO_2e: =

$$\frac{\text{Volume of Water Withdrawn from the Mains } (m^3) \times \text{Water Supply Emission Factor } \left(\frac{kgCO_2e}{\text{Water Volume } (m^3)}\right)}{1000}$$

Category 6: Business Travel and Accommodations of the Group's Employees

This covers GHG emissions arising from flights, train journeys, taxi rides, public transportation, and accommodations related to Group employees' business travel. During emission calculations, the number of trips for each single journey is calculated separately and then summed.

- Train journeys were calculated based on equivalent road distances, and DEFRA emission factors were applied.
- Hotel accommodations were calculated based on the number of nights and country-specific DEFRA emission factors.
- Flight distances were determined based on the distance between airports and multiplied by DEFRA emission factors, taking into account the flight class (Economy/First Class) and flight distance category.

Category 7: Emissions from Employee Shuttle Services and Commuting

This covers GHG emissions arising from the use of shuttle service vehicles, rented vehicles, and employees' personal vehicles for commuting and transportation purposes.

Data on employee transportation has been evaluated based on either distance traveled or fuel consumption, depending on the vehicle type retrieved from the system. Total fuel consumption was calculated using hypothetical fuel consumption values determined by vehicle type, and emissions—including WTT—were calculated using IPCC emission factors.

Emissions from shuttle service vehicles, rented vehicles, and company vehicles were included in the calculations; however, rented and company vehicles within Scope 1 were excluded, and only emissions from shuttle service vehicles were assessed under Scope 3.

Calculations were made based on kilometers for shuttle service vehicles and on liters for other vehicles, in line with the available data format.

Category 9: Downstream Transportation and Distribution

This covers GHG emissions arising from the export of products manufactured by the Group, their distribution to local procurement centers, and retail sales. Delivery operations are carried out via sea, air, rail, and road transport. These were calculated using the same method as those used for Category 4.

Category 11: Use of Sold Products

GHG emission calculations related to the use phase by end users of products sold by the Group are based on sales data for flat glass, automotive glass, glass fiber, glass packaging, glassware, chromium, soda ash, and Oxyvit. Emissions were calculated considering the inputs required during the use of these products.

Category 12: End-of-life Treatment and Disposal of Sold Products of the Group

Sales data for glass, soda ash, chromium sulfate, and refractory products sold by the Group form the basis of the calculations. It is assumed that products other than chemicals are recycled, while chemical products are disposed of as industrial waste.

Category 14: Emissions from Franchise Operations

Emissions from energy consumption at Şişecam's stores are addressed under this category. The total annual electricity consumption of the stores was obtained and multiplied by the IEA 2023 emission factors to calculate emissions. Additionally, total water consumption was assessed using the water supply emission factor based on DEFRA data.

Category 15: Emissions Arising from Entities in which the Group Has Invested

It is calculated by aggregating the direct emissions (Scope 1 and Scope 2) of entities in which the Group has invested, based on the ownership share (i.e., equity interest).

Scope 1 and Scope 2 emissions of Saint Gobain Glass Egypt S.A.E., Saint Gobain Egypt for Glass Industries S.A.E., Saint Gobain Trade Egypt, Saint Gobain Mirrors Egypt, Solvay Sisecam Holding AG, and Solvay Sodi AD were included in the calculations in proportion to Şişecam's equity share.

Scope 3 Categories	Emission Factor Unit	Reference Source
Category 1: Purchased Goods and Services	$kgCO_2e$ / ton (or unit)	Ecoinvent 3.10, Metsims Database, EPD (Environmental Product Declarations), DEFRA 2024, Water Supply
Category 2: Capital Goods Owned and Utilized by the Group	$kgCO_2e$/USD (based on the 2022 exchange rate)	EPA 2007, Supply Chain GHG Emission Factors v1.3
Category 3: Fuel and Energy-Related Activities	$kgCO_2e$/kWh	IEA 2023 (International Energy Agency)
Category 4: Upstream Transportation and Distribution	$kgCO_2e$/tkm	DEFRA 2024, Freighting Goods
Category 5: Disposal of Waste Generated Through the Group's Operations	$kgCO_2e$/ton	DEFRA 2024, Waste Disposal
Category 6: Business travel of the Group's Employees	Flights: $kgCO_2e$/km Accommodation: $kgCO_2e$/number of rooms Public transportation: 0.566 Train: 0.044432	DEFRA 2024, Business Travels, Air DEFRA 2024, Hotel Stay EPA v1.3: 485119 DEFRA 24: International Train
Category 7: Emissions from Employee Shuttle Services and Commuting	$kgCO_2e$/km	IPCC 2006 Guidelines – Volume 2, Chapter 3, Table 3.2.1.
Category 9: Downstream Transportation and Distribution	$kgCO_2e$/ton*km	DEFRA 2024, Freighting Goods
Category 11: Use of Sold Products	ton CO_2/tons soda (ash)	IPCC 2006 Guidelines – Volume 3, Chapter 2, Table 2.1.
Category 12: End-of-life Treatment and Disposal of Sold Products of the Group	$kgCO_2e$/ton	DEFRA 2024, Waste Disposal
Category 14: Emissions from Franchise Operations	$kgCO_2e/m^3$ $kgCO_2e$/kWh	DEFRA 2024, Water Supply IEA (International Energy Agency) 2023 Edition
Category 15: Emissions Arising from Entities in which the Group Has Invested	tCO_2e	Calculated using the equity share method.

Clean Water Consumption Intensity (m³/gross ton)

Formula:

Clean water consumption (m³) / Production Volume – Gross (ton)

Total Non-Hazardous Waste Quantity by Disposal Method (ton)

Formula:

Total Non-Hazardous Waste (ton) = Non-Hazardous Waste Recovered for Energy Production + Recycled Non-Hazardous Waste + Non-Hazardous Waste Sent for Incineration + Non-Hazardous Waste Sent to Landfill

Total Hazardous Waste Quantity by Disposal Method (ton)

Formula:

Total Hazardous Waste (ton) = Hazardous Waste Recovered for Energy Production + Recovered Hazardous Waste + Hazardous Waste Sent to Landfill + Hazardous Waste Sent for Incineration

Re-Opinion Statement

The measurement and reporting of verified data inevitably involve some degree of estimation. If changes exceeding 5% occur in the data at the company level, a re-opinion statement may be considered.

7.2. TSRS Content Index

TSRS 1 Core Content	TSRS 1 Standard	Corresponding TSRS 1 Standard Disclosure	Relevant Section / Disclosure in the Report
Governance	27 (a): Governance body/bodies (which may include a board, committee, or equivalent entity responsible for senior management) or individual(s) responsible for overseeing sustainability-related risks and opportunities	TSRS 1 27 (a) (i)	3.1. Sustainability Governance 3.2. Working Groups and Support Structures
		TSRS 1 27(a) (ii)	3.4. Sustainability and Climate-Related Competencies
		TSRS 1 27(a) (iii)	3.1. Sustainability Governance
		TSRS 1 27(a) (iv)	3.3. Governance of Sustainability Strategy and Targets
		TSRS 1 27(a) (v)	3.3. Governance of Sustainability Strategy and Targets 3.5. Integration of Climate-Related Performance into the Compensation System
	27 (b): Management's duties in governance processes, controls, and procedures used to monitor, manage, and oversee sustainability-related risks and opportunities	TSRS 1 27(b) (i)	3.2.2. Board of Directors' Oversight and Supporting Controls and Procedures
		TSRS 1 27(b) (ii)	
Strategy	29: Impacts of sustainability-related risks and opportunities on the organization's strategy and decision-making processes	TSRS 1 29(c)	4.1. Climate Transition Plan
	30: Sustainability-related risks and opportunities	TSRS 1 30(c)	4.2. Climate-Related Risks and Opportunities
	33: Strategy and decision-making	TSRS 1 33(c)	4.5.2. Trade-off
Risk Management	44 (a): Processes implemented for identifying, assessing, prioritizing, and monitoring sustainability-related risks, along with the policies governing these processes	TSRS 1 44(a) (i)	5.1. Identification and Monitoring of Climate-Related Risks 5.2. Assessment and Prioritization of Climate Risks
		TSRS 1 44(a) (ii)	5.1. Identification and Monitoring of Climate-Related Risks
		TSRS 1 44(a) (iii)	5.1. Identification and Monitoring of Climate-Related Risks 5.2. Assessment and Prioritization of Climate Risks
		TSRS 1 44(a) (iv)	5.2. Assessment and Prioritization of Climate Risks
		TSRS 1 44(a) (v)	5.1. Identification and Monitoring of Climate-Related Risks
	44 (b): Processes implemented by the entity to identify, assess, prioritize, and monitor sustainability-related opportunities	TSRS 1 44(b)	5.1. Identification and Monitoring of Climate-Related Risks

TSRS 1 Core Content	TSRS 1 Standard	Corresponding TSRS 1 Standard Disclosure	Relevant Section / Disclosure in the Report
Metrics and Targets	46(b): The entity's sustainability performance in relation to sustainability-related risks and opportunities, including progress toward addressing those risks and opportunities, the targets it has set for itself, and the targets it is required to meet under applicable legislation	TSRS 1 46(b)	6.4.1. Production 6.4.2. Energy Management 6.4.3. Water Management 6.4.4. Materials
	51: The entity discloses information on the targets it has set to monitor progress toward achieving its strategic objectives, as well as the targets it is required to meet under applicable legislation.	TSRS 1 51(c)	6.1. Sustainability and Climate-Related Targets
		TSRS 1 51(d)	
		TSRS 1 51(e)	
		TSRS 1 51(g)	
General Requirements	Sources of Guidance	TSRS 1 54	2.7. Sources of Guidance
		TSRS 1 55(a)	
		TSRS 56	
		TSRS 1 59(a)	
		TSRS 1 59(b)	
	Location of Disclosure	TSRS 1 60	2.2. Reporting Period and Location of Disclosures
		TSRS 1 61	
	Reporting Period	TSRS 1 64	2.2. Reporting Period and Location of Disclosures
	Comparative Data	TSRS 1 70	The Group has benefited from the transitional provisions applicable to the first reporting year within the scope of compliance with the Türkiye Sustainability Reporting Standards (TSRS). Accordingly, comparative data for previous periods has not been included in this report.

TSRS 1 Core Content	TSRS 1 Standard	Corresponding TSRS 1 Standard Disclosure	Relevant Section / Disclosure in the Report
General Requirements	Statement of Compliance	**TSRS 1 72**	2.8. Statement of Compliance
Judgements, Uncertainties, and Errors	Judgements	**TSRS 1 74**	2.9. Judgements, Uncertainties, and Errors
	Measurement uncertainties	**TSRS 1 77**	
	Errors	**TSRS 1 83**	

TSRS 2 Core Content	TSRS 2 Standard	Corresponding TSRS 2 Standard Disclosure	Relevant Section / Disclosure in the Report
Governance	6(a): Governance body/bodies (which may include a board, committee, or equivalent entity responsible for senior management) or individual(s) responsible for overseeing climate-related risks and opportunities	**TSRS 2 6(a)(i)**	3.1. Sustainability Governance 3.2. Working Groups and Support Structures 3.2.3. Sustainability Governance Organizational Chart
		TSRS 2 6(a)(ii)	3.4. Sustainability and Climate-Related Competencies
		TSRS 2 6(a)(iii)	3.1. Sustainability Governance
		TSRS 2 6(a)(iv)	3.3. Governance of Sustainability Strategy and Targets
		TSRS 2 6(a)(v)	3.3. Governance of Sustainability Strategy and Targets 3.5. Integration of Climate-Related Performance into the Compensation System
	6(b): The management's duties and responsibilities within the governance processes, controls, and procedures for monitoring, managing, and overseeing climate-related risks and opportunities	**TSRS 2 6(b)(i)**	3.2.1. Responsibilities of Senior Management 3.2.2. Board of Directors' Oversight and Supporting Controls and Procedures
		TSRS 2 6(b)(ii)	3.2.2. Board of Directors' Oversight and Supporting Controls and Procedures

TSRS 2 Core Content	TSRS 2 Standard	Corresponding TSRS 2 Standard Disclosure	Relevant Section / Disclosure in the Report
Strategy	9: The entity discloses information to enable users of general purpose financial reports to understand its climate-related strategic disclosures.	TSRS 2 9(a)	4.2. Climate-Related Risks and Opportunities
		TSRS 2 9(b)	
		TSRS 2 9(c)	4.1. Climate Transition Plan 4.2. Climate-Related Risks and Opportunities
		TSRS 2 9(d)	4.2. Climate-Related Risks and Opportunities
		TSRS 2 9(e)	
	10: Climate-Related Risks and Opportunities	TSRS 2 10(a)	4.2. Climate-Related Risks and Opportunities
		TSRS 2 10(b)	
		TSRS 2 10(c)	
		TSRS 2 10(d)	
	13: Business Model and Value Chain	TSRS 2 13(a)	4.2. Climate-Related Risks and Opportunities
		TSRS 2 13(b)	
	14: Strategy and decision-making	TSRS 2 14(a)(i)	4.1. Climate Transition Plan
		TSRS 2 14(a)(ii)	4.5.1. Mitigation and Adaptation Efforts
		TSRS 2 14(a)(iii)	
		TSRS 2 14(a)(iv)	4.1. Climate Transition Plan

TSRS 2 Core Content	TSRS 2 Standard	Corresponding TSRS 2 Standard Disclosure	Relevant Section / Disclosure in the Report
Strategy	14: Strategy and decision-making	TSRS 2 14 (a) (v)	4.1. Climate Transition Plan
		TSRS 2 14 (b)	4.2.1. Impacts of Climate-Related Risks and Opportunities on Financial Planning
		TSRS 2 14 (c)	
	15 & 16: Financial position, financial performance, and cash flows	TSRS 2 15 (a)	4.2. Climate-Related Risks and Opportunities
		TSRS 2 15 (b)	
		TSRS 2 16 (a)	
		TSRS 2 16 (c)	4.2. Climate-Related Risks and Opportunities 4.2.1. Impacts of Climate-Related Risks and Opportunities on Financial Planning
	22: Climate resilience	TSRS 2 22 (a) (i)	4.5. Climate Resilience
		TSRS 2 22 (a) (ii)	4.3.2. Assessment of Opportunities
		TSRS 2 22 (a) (iii) (1)	
		TSRS 2 22 (a) (iii) (2)	4.5. Climate Resilience
		TSRS 2 22 (a) (iii) (3)	
	22: Climate resilience	TSRS 2 22 (b) (i) (1)	4.3. Materiality-Based Risk Analysis
		TSRS 2 22 (b) (i) (2)	
		TSRS 2 22 (b) (i) (3)	

TSRS 2 Core Content	TSRS 2 Standard	Corresponding TSRS 2 Standard Disclosure	Relevant Section / Disclosure in the Report
Strategy	22: Climate resilience	TSRS 2 22(b) (i) (4)	4.3. Materiality-Based Risk Analysis
		TSRS 2 22(b) (i) (5)	
		TSRS 2 22(b) (i) (6)	
		TSRS 2 22(b) (i) (7)	
		TSRS 2 22(b) (ii) (1)	4.3.1. Scenario Analyses
		TSRS 2 22(b) (ii) (2)	
		TSRS 2 22(b) (ii) (3)	
		TSRS 2 22(b) (ii) (4)	
		TSRS 2 22(b) (ii) (5)	
		TSRS 2 22(b) (iii)	4.3. Materiality-Based Risk Analysis
Risk Management	25(a): Processes implemented for identifying, assessing, prioritizing, and monitoring climate-related risks, along with the policies governing these processes	TSRS 2 25(a) (i)	5.1. Identification and Monitoring of Climate-Related Risks 5.2. Assessment and Prioritization of Climate Risks
		TSRS 2 25(a) (ii)	5.1. Identification and Monitoring of Climate-Related Risks
		TSRS 2 25(a) (iii)	5.1. Identification and Monitoring of Climate-Related Risks 5.2. Assessment and Prioritization of Climate Risks
		TSRS 2 25(a) (iv)	5.2. Assessment and Prioritization of Climate Risks
		TSRS 2 25(a) (v)	5.1. Identification and Monitoring of Climate-Related Risks

TSRS 2 Core Content	TSRS 2 Standard	Corresponding TSRS 2 Standard Disclosure	Relevant Section / Disclosure in the Report
Risk Management	25(a): Processes implemented for identifying, assessing, prioritizing, and monitoring climate-related risks, along with the policies governing these processes	TSRS 2 25(a)(iv)	As this is the Group's first report published under the TSRS framework, no comparative data from previous periods has been presented.
	25(b): Processes implemented by the entity for identifying, assessing, prioritizing, and monitoring climate-related risks and opportunities, including information on whether climate-related scenario analysis was used and, if so, how it was applied	TSRS 2 25(b)	5.1. Identification and Monitoring of Climate-Related Risks
	25(c): The extent to which and how the processes for identifying, assessing, prioritizing, and monitoring climate-related risks and opportunities are integrated into the entity's overall risk management process, and the extent to which and how these processes inform the entity's overall risk management	TSRS 2 25(c)	
Metrics and Targets	29: Climate-related metrics	TSRS 2 29(a)(i)	6.2.1. Operational Greenhouse Gas (GHG) Emissions 6.2.2. Value Chain-Related Greenhouse Gas Emissions
		TSRS 2 29(a)(ii)	6.3.1. Calculation Approach
		TSRS 2 29(a)(iii)	
		TSRS 2 29(a)(iv)	6.2.1. Operational Greenhouse Gas (GHG) Emissions
		TSRS 2 29(a)(v)	
		TSRS 2 29(a)(vi)	6.2.2. Value Chain-Related Greenhouse Gas Emissions
		TSRS 2 29(g)(i)	3.5. Integration of Climate-Related Performance into the Compensation System
		TSRS 2 29(g)(ii)	
	33: Climate-related targets	TSRS 2 33(a)	6.1. Sustainability and Climate-Related Targets
		TSRS 2 33(b)	

TSRS 2 Core Content	TSRS 2 Standard	Corresponding TSRS 2 Standard Disclosure	Relevant Section / Disclosure in the Report
Metrics and Targets	33: Climate-related targets	TSRS 2 33(d)	6.1. Sustainability and Climate-Related Targets
		TSRS 2 33(e)	
		TSRS 2 33(g)	
		TSRS 2 34(a)	
		TSRS 2 34(b)	6.1.1. Target Setting and Review Approach
		TSRS 2 34(c)	
		TSRS 2 34(d)	6.1. Sustainability and Climate-Related Targets
		TSRS 2 35	6.1.2. Performance Against Climate Targets
		TSRS 2 36(a)	6.1. Sustainability and Climate-Related Targets
		TSRS 2 36(b)	
		TSRS 2 36(c)	
		TSRS 2 36(e)	6.1.2. Performance Against Climate Targets

7.3. Limited Assurance Statement under the TSRS

CONVENIENCE TRANSLATION INTO ENGLISH OF PRACTITIONER'S LIMITED ASSURANCE REPORT ORIGINALLY ISSUED IN TURKISH

INDEPENDENT PRACTITIONER'S LIMITED ASSURANCE REPORT ON TÜRKİYE ŞİŞE VE CAM FABRİKALARI A.Ş. AND ITS SUBSIDIARIES SUSTAINABILITY INFORMATION IN ACCORDANCE WITH TURKISH SUSTAINABILITY REPORTING STANDARDS

To the General Assembly of Türkiye Şişe Ve Cam Fabrikalari A.Ş.

We have undertaken a limited assurance engagement on Türkiye Şişe Ve Cam Fabrikalari A.Ş. (the "Company") and its subsidiaries (collectively referred to as the "Group"), sustainability information for the year ended 31 December 2024 in accordance with Turkish Sustainability Reporting Standards 1 "General Requirements for Disclosure of Sustainability-related Financial Information" and Turkish Sustainability Reporting Standards 2 "Climate Related Disclosures" ("Sustainability Information").

Our assurance engagement does not extend to information in respect of earlier periods or other information linked to the Sustainability Information (including any images, audio files, document embedded in a website or embedded videos).

Our Limited Assurance Conclusion

Based on the procedures we have performed as described under the 'Summary of the work we performed as the basis for our assurance conclusion' and the evidence we have obtained, nothing has come to our attention that causes us to believe that Group's Sustainability Information for the year ended 31 December 2024 is not prepared, in all material respects, in accordance with Turkish Sustainability Reporting Standards published in the Official Gazette dated 29 December 2023, and numbered 32414(M) and issued by Public Oversight Accounting and Auditing Standards Authority (the "POA") . We do not express an assurance conclusion on information in respect of earlier periods.

Inherent Limitations in Preparing the Sustainability Information

As discussed in "Calculation Principles for Metrics" on pages 41 to 52 the Sustainability Information is subject to inherent uncertainty because of incomplete scientific and economic knowledge. Greenhouse gas emission quantification is subject to inherent uncertainty because of incomplete scientific knowledge. Additionally, the Sustainability Information includes information based on climate-related scenarios that is subject to inherent uncertainty because of incomplete scientific and economic knowledge about the likelihood, timing or effect of possible future physical and transitional climate-related impacts.

Responsibilities of Management and Those Charged with Governance for the Sustainability Information

Management of Group are responsible for:

- Preparation of the sustainability information in accordance with Turkish Sustainability Reporting Standards;
- Designing, implementing and maintaining internal control over information relevant to the preparation of the Sustainability Information that is free from material misstatement, whether due to fraud or error;
- The Group Management is also responsible for the selection and implementation of appropriate sustainability reporting methods, as well as making reasonable assumptions and developing estimates in accordance with the conditions.

Those charged with governance are responsible for overseeing the Group's sustainability reporting process.

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Practitioner's Responsibilities for the Limited Assurance on Sustainability Information

We are responsible for:

- Planning and performing the engagement to obtain limited assurance about whether the Sustainability Information is free from material misstatement, whether due to fraud or error;
- Forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- Reporting our conclusion to the Group Management.
- Perform risk assessment procedures, including obtaining an understanding of internal control relevant to the engagement, to identify where material misstatements are likely to arise, whether due to fraud or error, but not for the purpose of providing a conclusion on the effectiveness of the Group's internal control.
- Design and perform procedures responsive to where material misstatements are likely to arise in the sustainability information. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Misstatements can arise from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of Sustainability Information.

As we are engaged to form an independent conclusion on the Sustainability Information as prepared by management, we are not permitted to be involved in the preparation of the Sustainability Information as doing so may compromise our independence.

Professional Standards Applied

We performed a limited assurance engagement in accordance with Standard on Assurance Engagements 3000 (Revised) Assurance Engagements other than Audits or Reviews of Historical Financial Information and, in respect of greenhouse gas emissions included in the Sustainability Information, in accordance with Standard on Assurance Engagements 3410 Assurance Engagements on Greenhouse Gas Statements, issued by POA.

Our Independence and Quality Management

We have complied with the independence and other ethical requirements of the Ethical Rules for Independent Auditors (including Independence Standards) (the ''Ethical Rules'') issued by the POA, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. Our firm applies Standard on Quality Management 1 and accordingly maintains a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. Our work was carried out by an independent and multidisciplinary team including assurance practitioners, sustainability and risk experts. We used the work of experts, in particular, to assist with determining the reasonableness of Group's information and assumptions related to climate and sustainability risks and opportunities. We remain solely responsible for our assurance conclusion.

Summary of the Work we Performed as the Basis for our Assurance Conclusion

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the Sustainability Information is likely to arise. The procedures we performed were based on our professional judgment. In carrying out our limited assurance engagement on the Sustainability Information, we:

- Inquiries were conducted with the Group's key senior personnel to understand the processes in place for obtaining the Sustainability Information for the reporting period
- The Group's internal documentation was used to assess and review the information related to sustainability;
- Considered the presentation and disclosure of the Sustainability Information.
- Through inquiries, obtained an understanding of Group's control environment, processes and information systems relevant to the preparation of the Sustainability Information, but did not evaluate the design of particular control activities, obtain evidence about their implementation or test their operating effectiveness;
- Evaluated whether Group's methods for developing estimates are appropriate and had been consistently applied, but our procedures did not include testing the data on which the estimates are based or separately developing our own estimates against which to evaluate Group's estimates;
- Obtained understanding of process for identifying risks and opportunities that are financially significant, along with the Group's sustainability reporting process.

The procedures in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

PwC Bağımsız Denetim ve
Serbest Muhasebeci Mali Müşavirlik A.Ş.

Ali Yörük
Independent Auditor

İstanbul, 1 August 2025

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