PROJECT ÇİMSA

NON-TECHNICAL SUMMARY

Çimsa Çimento Sanayi ve Ticaret A.Ş.

(ÇİMSA)

Contents

ABBREVIATIONS

Abbreviation	Definition
Company	Çimsa Çimento Sanayi ve Ticaret A.Ş. (ÇİMSA)
E&S	Environmental and Social
EBRD	The European Bank for Reconstruction and Development
ESAP	Environmental and Social Action Plan
ESDD	Environmental and Social Due Diligence
GBVH	Gender Based Violence and Harassment
GHG	Greenhouse Gas
NTS	Non-Technical Summary
PR	Performance Requirements (of the EBRD)
SEP	Stakeholder Engagement Plan

1 Introduction

1.1 Eskişehir Cement Plant

Eskişehir cement plant ("the Site") is located in Tepebaşı district of Eskişehir province located in western Türkiye (Figure 1). The Site is located in an agricultural and residential setting where the nearest residential area is Çukurhisar neighborhood, located approximately 1.2 km to the east of the Site.

The Site is engaged in the production of clinker and cement, where cement manufacturing process is mainly comprised of raw material mining, raw material preparation, clinker, and cement production, milling and packaging. The operations started in Eskişehir cement plant in 1957 and ÇİMSA acquired the Site in 2005.

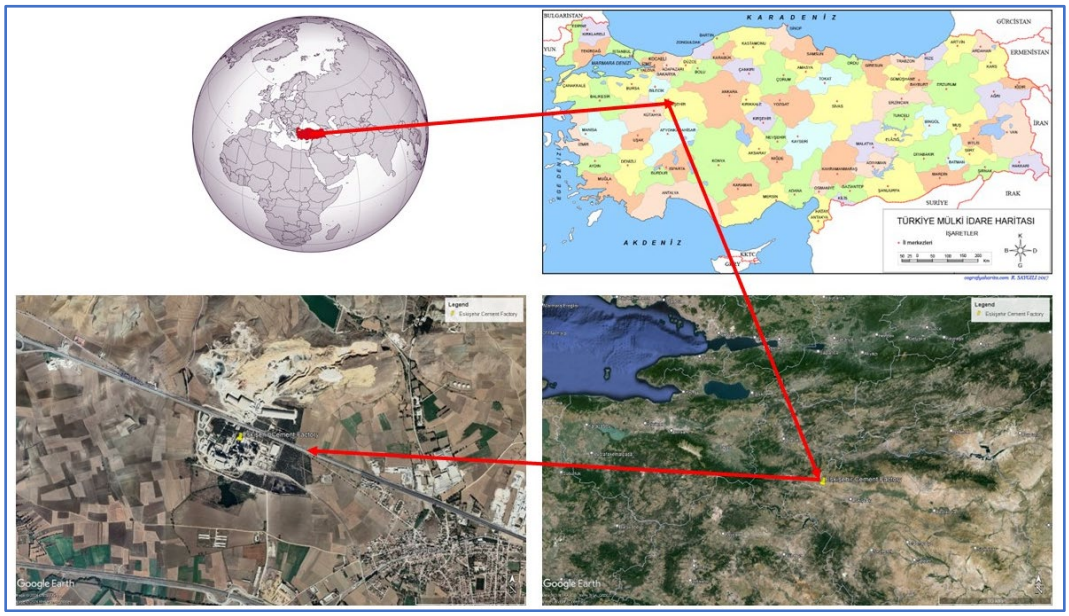

Figure 1. Location of Eskişehir Cement Plant

1.2 Project

The proceeds of the EBRD Loan will be used for the Company's decarbonisation investment program which includes installation of (i) 10.8 MWe solar power plant, (ii) 5.5 MWe WHR power plant, (iii) complementary process and technology upgrades at Eskisehir plant as part of the Company's decarbonisation strategy.

The waste heat recovery system entails the collection of waste heat generated in the After Quenching Chamber (AQC) and Pre-Heater (PH) of the 2nd Rotary Kiln by AQC and PH boilers and subsequent use of heat to evaporate cyclopentane which will be used to rotate turbines and generate electricity in the waste heat recovery energy facility that operates based on the principle of Organic Rankine Cycle (ORC). A high-level process flow is illustrated in Figure 2.

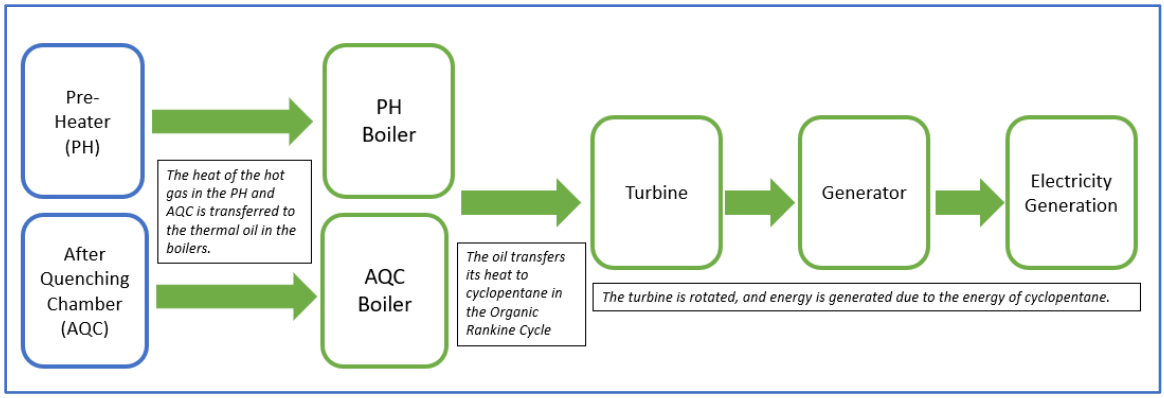

Figure 2. High-level process diagram of the WHR system

As reported by ÇİMSA representatives, the installed capacity of the WHR facility is 5.5 MWe (gross). The Company expects 500 kWh internal energy consumption and the net production to be 5 MWe (net). The WHR facility is expected to meet 25% of internal energy demands of Eskişehir cement plant with an estimated annual electricity generation of 40,000 MWh. Enerjisa, another subsidiary of Sabancı Holding, is the main contractor for the WHR project and was implementing the construction works with several subcontractors (Figure 3) in March 2024. According to the latest schedule made available by ÇİMSA, it is planned to commission the WHR facility in December 2024.

Figure 3. View from construction works of the WHR facility

In line with its decarbonization strategy, ÇİMSA plans to commission a solar power plant (SPP) with 10.8 MWe/14.2MWp/14.2 MWm installed capacity within the scope of the Regulation on Unlicensed Electricity Generation in the Electricity Market which allows offsetting electricity consumption of the companies with renewable energy generated by renewable energy plants, such as solar power plants. According to annual production estimations, the SPP is expected to generate around 20,000 MWh electricity annually (Figure 4).

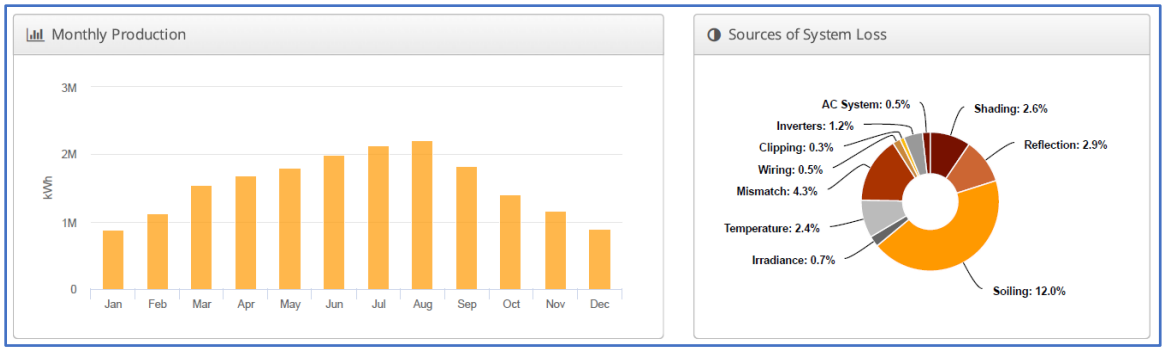

Figure 4. Monthly production and sources of system loss prediction

A high level schematics of the SPP layout is presented in Figure 5.

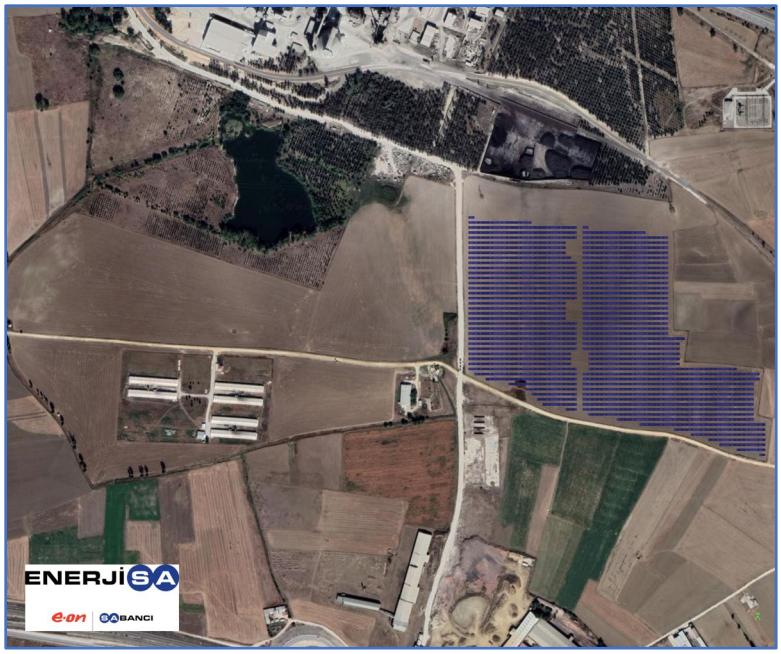

Figure 5. Early design schematics of the SPP (panels are shown in blue)

The Company has obtained the legally required call letter (official consent to connect to the 154 kV ÇİMSA Eskişehir Transformer Center (154 kV switchyard, already owned by ÇİMSA) from Turkish Electricity Transmission Corporation (TEİAŞ in Turkish) upon its application on 31.05.2023.

EIA Status of the Project

WHR facility is considered outside the scope of the EIA regulation as the investment does not lead to a capacity increase. On the other hand, the SPP project falls under the EIA Regulation in force, Annex-I, Section 43 – "Solar power plants with a project area of ≥ 20 hectares or with installed capacity ≥10 MWe". Accordingly, the Company prepared the legally required EIA report. The final draft EIA report dated 15.11.2023 has been approved by the MoUECC and the EIA Positive document was issued by the MoEUCC on 19.05.2024.

2 Who is ÇİMSA and Where Can I Learn More About the Project

ÇİMSA, a subsidiary of Sabancı Holding, was founded in Mersin in 1972. The Company carries out its manufacturing operations via its three integrated factories in Mersin, Eskişehir and Afyonkarahisar, Türkiye and globally with one integrated cement plant in Buñol, Spain, one cement grinding plant in the USA, terminals in Germany, Spain, Italy and TRNC. The Company provides the necessary materials for long-lasting living spaces and infrastructures and pioneers the Turkish cement and building materials industry in terms of innovation via its special products including white cement and calcium aluminate cement, in addition to the grey cement. Focusing on profitable growth and creating value for all its stakeholders, the Company aims to sustain and expand these achievements in the future.

This Non-Technical Summary provides brief information about the Project. For more information, you can reach ÇİMSA through the Company's website (https://cimsa.com.tr/en/contact/).

3 What Are the Benefits of the Project?

Categorized B under the Environmental and Social Policy (2019) of the EBRD, the Project will support ÇİMSA's decarbonisation strategy and will help contribute to meeting the national targets related to climate change targets and to the reduction of greenhouse gas (GHG) emissions and increased energy efficiency. To better demonstrate the benefits of the Project, a simplified comparative analysis of the Project with the No-Project Alternative is summarised in Table 1 below:

Table 1. Comparison of the Project with the No-Project Alternative

Topic	With Project	No Project Alternative
National benefits	The Project contributes to meeting the national targets related to climate change targets. The Project will contribute to the reduction of GHG emissions and increased energy efficiency.	In the No Project Scenario, the waste heat recovery system and solar power plant would not be in place to support the decarbonisation attempts of ÇİMSA.
Environmental and social impacts	The environmental and social impacts of the Project are considered as a continuum of risks posed by existing operations, as such, the Company will address the E&S risks associated with the Project through the review and revisions of existing E&S management systems and relevant plans and procedures. Project specific risks, such as the process safety risks posed by the WHR facility, community health and safety risks, etc., will be addressed through the implementation of a Project specific environmental and social action plan.	In the No Project Scenario, renewable energy generation and increased energy efficiency of the Company operations would not take place.
Employment	Employment opportunities have been provided by the Company and will continue to be provided during the Project. The existing operation workforce will continue their	In the No Project Scenario, there would not be any additional employment.

Topic	With Project	No Project Alternative
	services during the Project. ÇİMSA is committed to maximise the localisation of the workforce during construction and operation phases of the Project.	
Procurement	ÇİMSA aims to maximise local procurement to the extent possible.	In the No Project Scenario, there would be no benefits to local procurement.

ÇİMSA is committed to manage the environmental and social impacts of the Project in compliance with the requirements of applicable national legislation as well as EBRD's Environmental and Social Policy (2019) and the associated PRs.

4 What Are the Key Environmental and Social Impacts of the Project?

The Project's potential environmental and social impacts were assessed during Project's Environmental and Social Due Diligence (ESDD) study conducted in March 2024. The ESDD entailed consultations with stakeholders to understand the Project's potential risks, impacts and mitigations to reduce identified negative impacts, and to expand positive impacts. A summary of environmental and social (E&S) management systems and key E&S issues associated with existing operations and the Project is presented below. The key E&S gaps, risks, and potential adverse impacts as well as the mitigation measures to be taken by ÇİMSA are summarised in Table 2.

Environmental and Social Management Systems

ÇİMSA has corporate level E&S policies and management systems which are implemented onsite through dedicated teams. On the other hand, management of social risks beyond the borders of Eskişehir cement plant will need to be further addressed through specific management plans to safeguard the reputation of ÇİMSA and to align existing operation and the Project (particularly the SPP) with the relevant policies of ÇİMSA and EBRD PRs. Although the organisational capacity of ÇİMSA in Eskişehir cement plant was observed to be highly satisfactory for environmental, health and safety management, social risk management (except HR related issues) was identified as an area of improvement for the overall sustainability management. Accordingly, addressing and managing social risks beyond the borders of Eskişehir cement plant, including community health and safety risks and potential impacts on local communities, etc will be improved by ÇİMSA through the improvement of its existing E&S management system and development of specific management plans, such as Dust Management Plan.

Dust Management

There are 89 stacks in Eskişehir cement plant all equipped with fabric (dust) filters, except the clinker cooling stacks of kilns which are equipped with electrostatic filters. The emission stacks of kilns are equipped with continuous emission monitoring system (CEMS), reporting directly to the MoEUCC on a daily basis. In addition, flue gas and ambient air emissions are verified through measurements by accredited laboratories every two years. Although the annual average emission limit values (ELVs) for dust are met, there were instances as captured in the CEMS where the dust concentrations exceeded the ELV in the past.

At Eskişehir cement plant, due to the nature of the work, dust emissions have the potential to affect not only the workforce but also the safety of the local community. For this purpose, ÇİMSA has developed a dust reduction action plan to reduce fugitive dust and stack gas dust emissions. Although ÇİMSA has identified various areas for improvement, the internal dust reduction action plan has areas for improvement to identify and fully scan/monitor all dust sources and affected receptors.

Community Health and Safety and External Grievance Management

Eskişehir cement plant is located approximately 1.2 km to the west of Çukurhisar neighbourhood (old and new Çukurhisar neighbourhoods). As such, the local communities in Çukurhisar may be negatively impacted by the routine operations of Eskişehir cement plant (e.g., dusting). In addition, access roads leading to Göztepe mines operated by ÇİMSA pass through agricultural plots and areas where animal husbandry is practiced. Trucks carrying raw materials to Eskişehir cement plant may lead to dust problems

and road safety risks to the sensitive receptors along the access road. Site levelling works, panel installations and regular use of construction equipment associated with the construction phase of the SPP will inevitably result in construction noise and dust generation and the nearby residential areas and land users, including local businesses such as poultry farms, may be negatively impacted from construction noise and dust. In addition to construction phase impacts (mainly dust and noise), one of the significant impacts of solar power plants during operation phase may be the glint and glare effect as a result of the image or light created by direct sunlight or a bright sky reflected from the panels. It was observed during the site visit that there are receptors around the SPP area which may be negatively impacted from glaring impacts. As the access road from the Eskişehir plant to the Göztepe mine passes adjacent to the SPP area and from the proximity of poultry farms and residential areas, the impacts on these receptors should be managed with utmost care.

Table 2. Project's key E&S risks and impacts and the associated mitigation measures

Gap/Risk/Impact Description	Mitigation Measure
The nature of cement operations result in onsite and offsite potential dust generation which needs to be managed systematically through a management plan with a dedicated monitoring component. Existing and Project related activities have direct and indirect impacts on internal and external stakeholders, particularly the local communities and sensitive receptors in the vicinity of Eskişehir cement plant.	ÇİMSA will develop a standalone community health and safety risks assessment of existing and Project related risks to the local communities. ÇİMSA shall undertake a comprehensive survey to map dust sources and impacted receptors and develop and implement Dust Management Plan, integrating existing dust reduction actions implemented onsite, to reduce flue gas and fugitive dust emissions and minimise potential impacts on the workforce and local communities potentially impacted from Company operations. The Dust Management Plan shall be applied for the area of influence of ÇİMSA operations in Eskişehir, taking into account the quarries, as well as the receptors along the access roads and within the nearby settlements. The Plan shall be based on sound methodologies for the development of a dust source inventory, maintenance, operational controls, and ambient dust monitoring. ÇİMSA will develop and implement a Road and Traffic Safety Management Plan to address the risks associated with transportation of raw materials used in cement production from the quarries to the plant, transportation of waste to the plant for RDF, transportation of the produced cement to customers as well as transportation of solar panels and construction equipment to the SPP area.
There is room for improvement in terms of aligning the existing cement manufacturing operations with international standards and best available techniques.	As a good industry practice and on a best effort basis, ÇİMSA will improve the existing operations to align the Company with the EU Directive (2010/75/EU) on industrial emissions and the associated BAT Conclusions for the Production of Cement, Lime and Magnesium Oxide and undertake a detailed technical study report to explore options and opportunities to adopt the best available techniques presented in the BAT Conclusions for the Production of Cement, Lime and Magnesium Oxide Production.
There is room for improvement to further reduce the greenhouse gas emissions associated with the Company operations.	ÇİMSA will develop and implement a GHG Reduction Plan in accordance with the decarbonisation strategy of the Company. ÇİMSA has also identified GHG emission reduction pathway based on Science-Based Targets Initiative (SBTI). ÇİMSA's shall implement the following strategies as part of its decarbonisation pathway: • Increasing the use of alternative resources to reduce the use of fossil fuels and natural resources • Transition to a sustainable product portfolio containing low clinker and high additives to support the transition to a low carbon economy • Applications of decarbonised raw materials with low carbon density • Renewable energy production and supply (e.g., SPP project)

Gap/Risk/Impact Description	Mitigation Measure
	• Process optimization and energy efficiency (e.g., WHR project) • Technology improvement and new technology investments
The external stakeholders of ÇİMSA need to be engaged systematically and the external grievances need to be formally addressed through an external grievance mechanism.	ÇİMSA will implement a stakeholder engagement plan (SEP) and the external grievance mechanism. The SEP, in particular the external grievance mechanism, will be disclosed via the corporate web site and will be made available physically to local communities impacted from the Project (e.g., at the mukhtar's office, village tea house, at SPP area entrance, etc). All grievance shall be recorded and responded in line with the steps defined in the external grievance mechanism.

ÇİMSA is committed to manage the environmental and social impacts of the Project in compliance with the requirements of applicable national legislation as well as EBRD's Environmental and Social Policy (2019) and the associated PRs.

5 Monitoring and Reporting

Ongoing monitoring will be undertaken for the oversight of E&S performance and implementation of EBRD PRs. Based on the internal audits, ÇİMSA will also provide monitoring the progress of actions defined within the environmental and social action plan of the Project and the progress on the Project will be reported to the EBRD through annual Environmental and Social Monitoring Reports.

ÇİMSA prepares global reports as part of its sustainability strategy and discloses annual CDP Climate Change Report and CDP Water Report from its corporate website: https://cimsa.com.tr/en/sustainability/global-reports/. ÇİMSA has also developed a Stakeholder Engagement Plan (SEP) to disseminate timely information on the Project to the stakeholders and also to manage external grievances about the Project. The SEP and this Non-Technical Summary (NTS) will be disclosed from the web site and the grievances will be managed in line with the external grievance mechanism established for the Project. The SEP, external grievance mechanism and the NTS will be made available to the local communities in Çukurhisar neighbourhood (both old and new Çukurhisar neighbourhoods).

ÇİMSA will ensure full compliance with EBRD PRs and Turkish legislative requirements during the Project.