THE REPUBLIC OF TÜRKIYE

WORLD BANK PROGRAM-FOR-RESULTS

Accelerating the Market Transition for Distributed Energy

ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT

DRAFT FOR CONSULTATIONS

December 4, 2023

Table of Contents

List of Tables

List of Figures

ABBREVIATIONS AND ACRONYMS

AF	Associated Facility
BESS	Battery Energy Storage System
BRSA	Banking Regulation and Supervision Agency
CHS	Community Health and Safety
CİMER	Presidency's Communication Center
CO_2	Carbon dioxide
CTF	Climate Technology Fund
DLI	Disbursement Linked Indicators
DSPV	Distributed Solar PV
E&S	Environmental and Social
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EMRA	Energy Market Regulatory Authority
EMS	Environmental Management System
ESA	Environmental and Social Assessment
ESAP	Environmental and Social Action Plan
ESF	Environmental and Social Framework
ERET	Environmental and Social Evaluation Tool
ESS	Environmental and Social Standard
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESSA	Environmental and Social Systems Assessment
EU	European Union
FiT	Feed-in-Tariff
GHG	Greenhouse gases
GIIN	Global Impact Investing Network
GM	Grievance Mechanism

GT	Government of Türkiye
GRS	Grievance Redress Service
GW	Gigawatt
IBRD	International Bank for Reconstruction and Development
ILO	International Labor Organization
IPF	Investment Project Financing
kWh	Kilowatt-hour
MENR	Ministry of Energy and Natural Resources
MoTF	Ministry of Treasury and Finance
MW	Megawatt
OHS	Occupational Health and Safety
OM	Operational Manual
OSE	Occupational Safety Expert
PAD	Project Appraisal Document
PAP	Program's Action Plan
PDO	Project Development Objective
PforR	Program for Results
PFI	Participating Financial Intermediary
PFI	Partner Financial Institution
PIU	Project Implementation Unit
PV	Photovoltaic
RE	Renewable Energy
RSPV	Rooftop Solar PV
RP	Resettlement Plan
SEP	Stakeholder Engagement Plan
SDG	Sustainable Development Goals
SME	Small and Medium Enterprises
SMS	Sustainability Management Systems

TA	Technical Assistance
tCO2	Metric tonne of Carbon dioxide
TEIAS	Turkish Electricity Transmission Corporation
TKYB	Development and Investment Bank of Türkiye/*Turkiye Kalkinma ve Yatirim Bankasi*
TL	Turkish Lira
TSKB	Industrial Development Bank of Türkiye/*Turkiye Sinai Kalkinma Bankasi*
UNEP-FI	United Nations Environment Programme Finance Initiative
US$	United States Dollar
WB	World Bank
WBG	World Bank Group
YEKA	Renewable Energy Resource Areas/*Yenilenebilir Enerji Kaynak Alanları*

EXECUTIVE SUMMARY

Context and Objectives

This Environmental and Social Systems Assessment (ESSA) has been prepared by the World Bank in collaboration with the Government of Türkiye, as part of the preparation for a proposed Accelerating the Market Transition for Distributed Energy Program-for-Results (PforR) financing ('the Program') in Türkiye. The Program will support expansion of Türkiye's distributed solar photovoltaic market and piloting distributed battery electricity storage.

The ESSA examines applicable environmental and social management systems (ESMS) to assess their compliance with the Bank Policy Program-For-Results Financing. It aims to ensure that the Program's environmental and social risks will be managed adequately and that the Program complies with the basic principles of sustainable development. Paragraph 9 of the Bank Policy Program-For-Results Financing describes the core principles of environmental and social management that may be considered as relevant or applicable in the ESSA. These core principles are as follows:

- Promote environmental and social sustainability in the PforR Program design, avoid, minimize, or mitigate adverse impacts, and promote informed decision making relating to a program's environmental and social impacts.
- Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the PforR Program.
- Protect public safety and the safety of workers against the potential risks associated with: (a) construction and/or operation of facilities or other business practices in the program; (b) exposure to toxic chemicals, hazardous wastes, and other dangerous goods under the program; (c) reconstruction or rehabilitation of infrastructure in areas prone to natural hazards.
- Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists the affected people in improving or at the minimum restoring their livelihoods and living standards.
- Give due consideration to the cultural appropriateness of, and equitable access to, program benefits, giving special attention to the rights and interests of indigenous peoples and to the needs or concerns of vulnerable groups.
- Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

The ESSA evaluates the compatibility of the Program's systems with the core principles on two basic levels: (a) the systems as defined by laws, regulations, and procedures (the 'system as defined') and (b) the institutional capacity of implementation entities under the program to effectively implement the system (the 'system as it is applied in practice'). It identifies and analyzes the differences between the national systems and the core principles that apply to the Program on the two levels indicated above.

Approach for the ESSA

The preparation of the ESSA and the development of measures to strengthen the ESMS have benefited from various desk-based reviews and consultative processes, including the following:

- **Review.** The review focused on national legislation and other relevant regulations and policies in the areas of renewable energy, environmental, and social issues, with a special focus on identified environmental and social aspects relevant to the Program. These included environmental emissions, waste management, recycling, labor and occupational health and safety (OHS), land acquisition, and stakeholder engagement practices and existing grievance mechanisms in implementing agencies. The Bank also reviewed the existing environmental and social management systems (ESMS) of financial intermediaries Development and Investment Bank of Türkiye (TKYB) and Industrial Development Bank of Türkiye (TSKB) who will be the Program Implementing Agencies (PIAs), and their due diligence and implementation practices in the area of solar PV and battery energy storage system (BESS) projects. The following aspects of their respective ESMSs were assessed: a) approval process of proposed investments; b) E&S due diligence, screening and risk rating procedures; c) monitoring and reporting of the E&S aspects in approved investments; d) technical capacities of the E&S staff; e) external communication mechanism including a grievance mechanism (GM); f) staff training and capacity building on E&S aspects. TKYB's and TSKB's proposed approach for recycling not-in-use solar panels was also discussed and reviewed.

- **Initial stakeholder consultation meetings.** To develop a better understanding of implementation practices, procedures, standards, and the approach for this Program, in the period from June 2021 to November 2023 the Bank team carried out meetings with various stakeholders including technical staff in the Ministry of Energy and Natural Resources (MENR), TKYB, TSKB and with representatives of commercial banks and leasing companies in Türkiye as well as with business associations working in the area of renewable energy. These initial stakeholder consultation meetings informed key ESSA findings, contributed to formulating the ESSA Program Action Plan, and impacted the design of the Program. Further elaboration on these details can be found in the main ESSA report.

- **Formal consultations.** The draft ESSA was initially disclosed in the English and Turkish languages on December 4, 2023, through the external website of the Bank and website of the World Bank's Country Office in Türkiye, and public comments will be solicited during a period defined and reserved for comments until December 18, 2023.

- The Bank will carry out consultations with stakeholders on the draft ESSA report in a series of targeted meetings in Türkiye between November 30 and December 15, 2023. The draft ESSA report, including Executive Summary, in both English and Turkish languages, will be circulated prior to the meetings. Observations from the workshops will be incorporated into the final ESSA report and a complete list of participants and a summary of their comments will be included in Annex 5.

- The final ESSA report will be disclosed in the English and Turkish languages on the external website of the Bank.

- Communities and individuals who believe that they are adversely affected as a result of a Bank supported PforR operation, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance redress mechanism or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to

the Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of the Bank's non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. Information on how to submit complaints to the World Bank's corporate GRS is available at http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Program Description

The proposed Program Development Objective (PDO) is to expand Türkiye's distributed solar photovoltaic market and pilot distributed battery electricity storage.
The proposed PforR will focus on unlocking private sector investments and innovation in DSPV and BESS, thereby contributing to the achievement of the GoT's solar PV and BESS targets. Specifically, the proposed Program will focus on two results areas:

(a) **Results Area 1 - Scaling-up distributed solar PV.** Investments will support the installation of grid-connected distributed solar PV (DSVP) systems. The DSPV systems could include rooftop solar photovoltaic (RSPV) and ground-mounted solar PV, as well as newer technologies such as façade PVs and floating PV. The systems installed will be primarily for self-consumption, eligible for net metering[1] and connected to the distribution grid. This results area targets the commercial and industrial (C&I) market segments, which are essential to create the broader market ecosystem for DSPV. The eligible sub-borrowers include DSPV customers, DISCOs, leasing companies, and aggregators who own, operate, and maintain the DSPV systems for customers to supply electricity to C&I buildings.

(b) **Results Area 2 - Expanding the market and promoting innovation for distributed energy, including BESS.** This will help unlock commercial financing at scale for DSPV and support innovation for BESS. Under this results area: (i) the two Program Implementing Agencies (PIA) will set up a facility to finance commercial banks selected transparently and competitively; and (ii) these commercial banks will finance DSPV projects, including through their own financing. A recipient-executed grant of US$3 million from the Energy Sector Management Assistance Program (ESMAP) will be disbursed against the DLI for establishment of the facility. Separately, a Clean Technology Fund (CTF) US$30 million credit will support BESS investments financed by the PIAs, having an important demonstrational effect for the market and the broader banking industry. Eligible sub-borrowers for battery storage include renewable developers, battery storage companies, aggregators, and DSPV consumers.

Institutions, Roles, Responsibilities, and Coordination

The borrowers and PIAs are TSKB and TKYB, who will receive IBRD loans in accordance with the Program design to compensate for their financing of DSPV and BESS customers, developers and aggregators. The two PIAs are responsible for achieving the DLIs under the two Results Areas. The Program delivery through

[1] Only distributed PV subprojects that qualify for 'unlicensed' electricity production pursuant to the 'Unlicensed Electricity in the Electricity Market Production Regulation' No. 30772 published in the official gazette on May 12, 2019, and its subsequent amendments will be eligible for financing under the Program.

these PIAs is well suited to address the existing DSPV market failures considering the key role they play in Türkiye in addressing the lack of affordable financing and helping create new markets. These two PIAs will be responsible for reviewing, appraising and approving the eligible sub-loans.

Both TKYB and TSKB will have the responsibility for the financial, **environmental and social management and procurement of the activities they implement**. TKYB and TSKB will have the responsibility to implement, monitor and report on the agreed ESSA Program Action Plan.

In addition to the PIAs, other key agencies are the Ministry of Energy and Natural Resources (MENR), Energy Market Regulatory Authority (EMRA). MENR will play a key role in coordinating with the financing institutions and ensuring that the results and lessons from this Program are incorporated internally and factored into future planning and strategy for renewable energy generation. Further, MENR and EMRA are responsible for improving the policy and regulatory frameworks for distributed solar PV and BESS. EMRA is responsible for preparation of secondary legislation, setting out the pricing principles for regulated tariffs and approving, drafting, amending, enforcing and auditing performance for standards, distribution and customer services code.

Program Environmental and Social Effects

The Program's Social risk is assessed as Moderate, and Environmental risk as Moderate. The main social and environmental risks and impacts are associated with both results areas as introduced above. Rooftop and ground-mounted solar panels PV and distributed BESS will have certain environmental adverse risks and impacts such as: (i) waste management due to the installation, operation, maintenance, and decommissioning (disposal/recycling of not-in-use solar panels); (ii) dust and noise due to construction/installation works; (iii) sanitary wastewater management' (iv) road and traffic safety associated with movement of construction vehicles and solar PV transportation; (v) occupational health and safety risks for workers engaged in construction/installation/operation works such as working with high voltages, electrical equipment, direct current, working at heights, heavy lifting and potential fire/explosion and chemical hazards; (vi) community health and safety risks during installation, operation and disposal of not-in-use solar panels and other electric equipment needed for rooftop solar PV (RSPV), ground-mounted solar PV and BESS, and during construction of distribution lines; these may include potential fire/explosion, traffic safety, construction and maintenance activities in and around the settlements, (vii) resource use such as energy, water and raw materials and (viii) land clearance for installation of ground-mounted solar PV and BESS and for distribution lines to connect the PV or BESS with the distribution network (at 36 kV or below). Distribution lines will be treated as associated facilities (AF), because sub-loan borrowers will not be responsible for their construction. However, distribution line construction (installation of poles) may be required to connect the DSVP or BESS to the grid.

Potential social risks and impacts include (i) potential need for land acquisition for installation of ground-mounted solar PV and BESS; (ii) temporary land use restriction during the construction/installation of the distribution lines to connect the PV or BESS with the distribution network and (iii) community health and safety risks during installation, operation and disposal of RSPV, ground-mounted solar PV and BESS, and during distribution lines construction; and (iv) contextual risks associated with child and forced labor risks in the supply chain of PV, which will be addressed in the procurement process. The likelihood for construction of distribution lines is assessed as low to moderate and may occur in few cases. Thus, large civil works are not expected within the scope of the Program. It is expected that the land will be acquired on a willing buyer – willing seller basis, with private parties (landowners and private companies) involved

in these market-based transactions. Risks related to cultural heritage and biodiversity sensitive areas impacts are not expected, because investments with such impacts will not be eligible for financing under the PforR. TKYB's and TSKB's ESMS (discussed in chapter 4) will screen for such risk and impacts and eliminate them for Program eligibility. Overall, impacts caused by the activities under Results Area 1 and 2 are likely to be short term and site specific and can be mitigated by applying national laws and requirements of TKYB's and TSKB's ESMS. PV and BESS installation works will be carried out by licensed companies specializing in these installations.

Under Results Area 2, TSKB and TKYB will lend to FBs to on-lend to their own DSPV sub-borrowers. These activities will start in the second stage of the Program, which is anticipated to start in the third year of Program implementation. At the moment, these FBs are not known; however, the POM will include clear eligibility criteria for FBs including a requirement for ESMS procedures. Only FBs who meet eligibility criteria including a requirement for an adequate environmental and social management system (ESMS) and capacity to implement the E&S due diligence, and ESMS will be included in the Program. As part of the process of establishing the facility, the PIAs will provide awareness raising and capacity building support to prospective FBs to facilitate their capability to meet these eligibility criteria.

Main Social Effects of the Program

The Program activities will include construction and installation works of limited scale which will not cause the relocation of people, initiate a labor influx, or cause adverse impacts on communities. The Program is expected to create a wide range of social benefits including public health benefits caused by reduced air pollution emissions, increased awareness of clean energy solutions among stakeholders, and increased access to renewable energy by sub-project beneficiaries. The Program is not anticipated to cause adverse effects on gender, vulnerable and disadvantaged groups, poverty, and equity. The Program intends to address gender inequities through incorporation of gender gap analysis, actions to address the gender gaps and measurable indicators of associated outcomes.

Consultations with beneficiaries are part of the Program design. During Program preparation consultations with numerous stakeholders including business associations, financial intermediaries and solar power users have been carried out. These consultations also informed the overall Program design.

The main social risks associated with the Program are related to ESSA Core Principle #3 and #4 notably to the issues of workers and community health and safety, and land acquisition issues associated with activities under the Results Area 1 and 2. The main social risks and impacts were stated above. It is anticipated that the solar PVs will be located on a low productivity land which is not used for agricultural purposes. Therefore, overall social risk of the Program is assessed as moderate.

Main Environmental Effects of the Program

Environmental risks of the Program are assessed to be Moderate. It is anticipated that the PforR Program shall largely have positive environmental and social impacts, such as reduction in local pollutants and GHG emissions, and improved access to renewable energy sources. Overall, environmental risks and impacts associated with the Program were assessed as Moderate.

Impacts during the construction/installation of solar panels can be managed with robust application of appropriate management measures, most of which are included in the ESMS of TKYB and TSKB. Installation of distributed PV and BESS shall have certain environmental adverse risks and impacts such as: (i) waste management due to the construction/installation, maintenance, operation and decommissioning (disposal/recycling of not-in-use solar panels) and decommissioning (ii) dust and noise

due to construction/installation works, (iii) sanitary wastewater management, (iv) road/traffic safety considering construction vehicles and solar PV transportation, (v) occupational health and safety risks for workers engaged in construction/installation/operation works such as working with high voltages, electrical equipment, direct current, working at heights, heavy lifting and potential fire/explosion and chemical hazards, (vi) community health and safety risks during installation, operation and disposal of not-in-use solar panels and other electric equipment needed for rooftop solar PV (RSPV), ground-mounted solar PV and BESS, and during construction of distribution lines for Associated Facilities (AF); these may include potential fire/explosion, traffic safety, construction and maintenance activities in and around the settlements, (vii) resource use in terms of energy, water and raw materials and (viii) land clearance for installation of ground-mounted solar PV and BESS and for AF – distribution lines to connect the ground-mounted solar PV with the distribution network.

Large civil works are not expected within the scope of the Program. Overall, installation related impacts are likely to be short term and site specific and can be mitigated by applying internationally recognized best construction practices in addition to national legislation requirements. The environmental risks under the Program are expected to be moderate, because the risks will be limited in impact by project design, and the Government of Türkiye (GT) and PIAs have largely well-established and functional environmental and social regulatory and institutional frameworks in line with the core principles in World Bank policies. Since the PforR instrument cannot finance any investments associated with High risk and adverse impacts, the eligibility criteria for financing in the Operation Manual will specifically exclude this type of investments as well as any investments associated with Substantial risk.

Environmental and Social Systems Assessment

GT has followed the global environmental developments in terms of legislation and administrative systems. The environmental legislation had been structured under the Environmental Law of 1983 with supporting by-law, regulations and other legislative instruments including Regulation on Environmental Impact Assessment, Management of Waste, and Zero Waste. Environmental Law formed the backbone of the environmental regulatory system currently in force. Supporting legislation in the form of by-laws and normative acts gives technical specifications, establishes thresholds, details procedures, and provides other tools for enforcing policies and framework laws. As of today, the administration of environmental issues has been executed by Ministry of Environment, Urbanization and Climate Change (MoEUCC).

Türkiye has a relatively well-developed policy and legal framework on environmental assessment, waste management, land and labor and OHS issues. Recently amended EIA aligned with the EU regulation and international good practice guidance. The EIA Regulation requires screening, scoping, avoiding, minimizing, and mitigating adverse E&S impacts of the proposed activities as well as compensating for the residual impacts. Recent amendments also include social aspects such a requirement for social assessment and SEP preparation. Labor and OHS regulation is aligned with ILO conventions. The Constitution prohibits the forced labor, which is also treated as a criminal act under the law. One shortfall of the environmental regulation is that it does not apply any due diligence to small-scale works. Such activities are not subject even to the environmental screening, which means that small works that may carry environmental risks under certain circumstances would not be identified, and no mitigation measures would be applied to them. Furthermore, the Regulation requires full-scale environmental impact assessment for high/substantial risk activities (Annex 1 activities) and Screening and scoping documentation for substantial/ moderate risk activities (Annex 2 activities) which would include mitigation measures and commitments as appropriate to the risk level of the activities. No simpler

environmental management instruments (e.g., self-standing environmental management plans) are required for low-risk operations.

While the laws on land expropriations and voluntary market-based transactions are comprehensive and adequate, the main gap related to the eligibility of informal land users for any type of assistance. National laws do not provide for express requirement for livelihood restoration of affected persons.

While waste management regulation is detailed, it does not expressly require the recycling of the solar panels and BESS components. GT approved in 2022 Regulations on the Management of Waste from Electric and Electronic Equipment, providing for separation, collection, and organized storage of e-waste with the purpose of turning in to producers for recovery and recycling. The regulation does not include the solar panels and BESS as specific equipment**.**

Solid waste management and recycling infrastructure, including facilities for the disposal of waste have room for improvement especially for the disposal of not-in-use solar panels and BESS. Management of Waste Regulation introduces hierarchy of handling waste that prioritizes minimization of waste streams; requires waste separation, reuse, and recycling; promotes 'polluter pays' principle, and extended producer responsibility. The regulation does not clearly impose the recycling of the solar panels and BESS. GT approved in 2022 Regulations on the Management of Waste from Electric and Electronic Equipment, providing for separation, collection, and organized storage of e-waste with the purpose of turning in to producers for recovery and recycling. The regulation does not include the solar panels and BESS. The Regulation on the Waste Batteries and Accumulators (Last Amendment in 2014) require waste batteries and accumulators to be stored, labelled, transferred, and disposed as per the regulation requirements. This regulation does not provide clear instructions for the management of discarded solar panels and BESS units, either.

TSKB and TKYB have comprehensive ESMSs, which also rely on the international E&S standards. Their ESMSs address some of the gaps with national laws identified above. Both TSKB and TKYB have established ESMS that assess E&S risks; seek to avoid, minimize or mitigate adverse impacts; and monitor the E&S performance of its investments. Both TSKB and TKYB have in place OHS Policies, and accident reporting procedures. TSKB and TKYB has in places risk and impacts screening procedure including screening environmental and land impacts, and a requirement for project sponsors to prepare RAPs in line with international standards.

Both MENR and EMRA follow the national legislation and its mandatory requirements and procedures (i.e. EIA Regulation) with regards to environmental and social assessments to be carried out for the projects**.**

Institutional reforms undertaken to optimize executive units of the Government resulted in the generally adequate and suitable structures for administering sustainable and equitable use of natural capital and ecosystem services. At the same time, modest public expenditure on environmental management limits the number and skill-mix of human resources as well as the required physical infrastructure and equipment. Due to these shortages, the implementation of transformational new regulations is being phased in gradually to allow cost-intensive public facilities to come along and the private sector to adapt.

National regulations governing labor conditions and occupational health and safety are aligned with International Labor Organization conventions. Depending on the nature of operations and number of personnel employed, all legal entities are required to have designated occupational health and safety professionals on staff or on advisory contracts. The regulations also include provisions on workers' accommodation.

ESSA Program Action Plan

No	Action	Responsible Party	Timeline	Verification
1	Appoint and maintain competent specialists for the Program including: one environmental, one social and one OHS specialists to support Program implementation.	TSKB and TKYB	No later than 30 days after the Effective Date and maintain staffing during Program implementation	TSKB and TKYB submit to IBRD the qualifications and experience of appointed specialists and maintain required E&S staffing during Program implementation.
2	Submit E&S eligibility report for each candidate facility borrowers (FBs) for lending under the Results Area 2 to IBRD.	TSKB and TKYB	Before signing facility sub-loan agreement with facility borrowers	TSKB and TKYB submit to IBRD E&S eligibility reports for facility borrowers describing E&S procedures and E&S capacity of FBs.
3	Support the development and implementation of Solar Panel Recycling approach as described in Program's ESSA.	TKYB and TSKB	Throughout the Program implementation	TSKB and TKYB developed and implemented Solar Panel Recycling approach.

1. Introduction

Türkiye aspires to achieve carbon neutrality by 2053, but reaching such a goal requires major changes in its energy system. Türkiye's ratification of the Paris Agreement in October 2021 and its pledge to achieve net zero emissions by 2053, were strong signals of the country's commitment to join the global community in tackling the climate global emergency. As part of the Paris Agreement process, Türkiye submitted the first iteration of its Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) in November 2022, outlining its climate actions and targets. The Government of Türkiye (GoT) is also currently working on its Long-Term Decarbonization Strategy and its next National Development Plan for the 2024-2028 period (NDP), which will further define measures and actions to address climate change. As shown by the recently published Country Climate and Development Report (CCDR, 2022), Türkiye can also improve energy security through an accelerated pace of least-cost investments in domestic solar and wind—building on its track record of tripling renewable energy (RE) capacity in the last decade and investing in energy efficiency, battery, and pumped storage, geothermal, and gas generation with carbon capture and storage. This would require substantial commercial financing to enable the country to meet a doubling of energy demand by 2053 needed to fuel its growth ambitions, with the added benefits of lowering emissions and improving energy security.

Türkiye remains highly vulnerable to disaster and climate risks, including earthquakes[2] and more frequent extreme weather events. It has a 'high vulnerability' in 9 out of 10 climate vulnerability dimensions, compared with a median of 2 out of 10 in other OECD countries.[3] Climate-related disasters have been striking with greater frequency and intensity over the last two decades. In 2019 alone, 935 extreme events occurred, caused mainly by heavy rains and floods, windstorms, snow, and hail. Climate models predict this trend to continue with increasing abnormalities in precipitation patterns with more frequent extreme rain and floodings, as well as protracted drought and wildfires, and sea-level rise.

The proposed Program will help create a large market for commercial financing of distributed solar photovoltaics (DSPV) and battery energy storage system (BESS) to support Türkiye's energy security and accelerate decarbonization, through a sustainable and scalable mechanism. First, development of domestic renewable energy will enhance the country's energy security: each MWh of distributed solar generation will displace natural gas generation (mostly imported) not only advancing the country's decarbonization agenda but also its macroeconomic stability and energy independence. Second, as highlighted in the Türkiye CCDR, large investments would be required to decarbonize the Turkish economy, half of which are expected from the private sector. The proposed Program will leverage about US$300 million in private sector financing mostly for segments that are commercially viable, like commercial and industrial (C&I) consumers, whereas higher shares of concessional/public financing will be deployed for subprojects targeting innovative markets. It will then support transition to a fully commercial financed market for C&I customers while helping kick-start other untapped market segments. This would enable a commercial scale-up phase leading to a mature market.

[2] The February 6, 2023, earthquakes have resulted in the largest such disaster to hit the country in over 80 years.
[3] World Bank. 2022. *Country Climate and Development Report - Türkiye*.

There is strong government support for renewable energy development, including distributed energy resources (DER, combination of DSPV and BESS). However, availability of financing remains a key constraint to develop a domestic market ecosystem. The GoT has strengthened laws and regulation for DER over time. A regulation for 'unlicensed' electricity generation projects was issued in May 2019 (with subsequent amendments), to provide for generation facilities that can be established exempt from the obligations to obtain a preliminary license and license, and to establish a company. The regulation defines a list of eligible facilities including DSPV. The current regulation encourages self-consumption by capping distributed generation capacity based on the customer's 'contract power'[4], with the possibility for certain categories of consumers to receive remuneration for any excess generation injected into the grid. More recently, the requirement for the generation installations to be located at the consumption point or in the same distribution zone as the consumption point(s) has been lifted and some consumer categories (that is, municipalities and industrial and agricultural irrigation facilities) may install up to 2 times their contracted capacity.

Aggregation and third-party business models need to be enabled to scale up DER in Türkiye. Legislation changed in November 2022 allows for third-party business models and aggregation, while by-laws to implement such changes are under preparation. Under the prevailing business model in Türkiye, customers own, install, and maintain DSPV on their own site with full up-front payment for the system (that is, capital expenditure [CAPEX] model). In countries with relatively advanced DSPV markets, third-party models are common, under which private service providers, also known as renewable energy service companies (RESCOs), own, finance, install, and maintain DSPV systems at a monthly fee charged to the customers or sign power purchase agreements to sell DSPV electricity to their customers. These types of business models are critical to expand access to RE and its benefits in the residential and MSME markets given the small size of individual systems, their decentralized nature, and credit risks of customers. Aggregation can help reduce the burden of high up-front costs, increase available services for customers, and reduce overall DSPV costs through bulk procurement. However, these models are not viable in Türkiye as the participation of aggregators in the energy market is not regulated yet. The November 2022 amendment of the Energy Market Law recognized aggregators, but related by-laws are still under development by the Energy Market Regulatory Authority (EMRA) to regulate their participation in the sector, including in the unlicensed electricity market.

Residential and MSMEs market segment remain untapped. The market barriers mentioned above affect all market segments, but they are particularly acute for untapped markets, where availability of financing is coupled with a small number of business models tailored to the nature of such markets. Some commercial banks are considering various business models to reach out to individual consumers (for example, leasing and aggregation), but they struggle to operationalize them given the limitations of the current regulatory framework. The disaggregated nature of the residential sector poses specific challenges, which require piloting of innovative business models.

[4] 'Contract power' refers to the installed power specified in the electricity project of a place of use, multiplied by the utilization factor.

This Environmental and Social Systems Assessment (ESSA) was undertaken by the World Bank as part of the preparation of the Program for Results (PforR) for scaling-up distributed solar PVs in Türkiye.

1.1. Context and Objectives

This Environmental and Social Systems Assessment (ESSA) has been prepared by the World Bank in collaboration with the Government of Türkiye, as part of the preparation for a proposed Accelerating the Market Transition for Distributed Energy Program-for-Results (PforR) financing ('the Program') in Türkiye. The Program will support expansion of Türkiye's distributed solar photovoltaic market and piloting distributed battery electricity storage.

The ESSA examines applicable environmental and social management systems (ESMS) to assess their compliance with the Bank Policy Program-For-Results Financing. It aims to ensure that the Program's environmental and social risks will be managed adequately and that the Program complies with the basic principles of sustainable development. Paragraph 9 of the Bank Policy Program-For-Results Financing describes the core principles of environmental and social management that may be considered as relevant or applicable in the ESSA. These core principles are as follows:

- Promote environmental and social sustainability in the PforR Program design, avoid, minimize, or mitigate adverse impacts, and promote informed decision making relating to a program's environmental and social impacts.
- Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the PforR Program.
- Protect public safety and the safety of workers against the potential risks associated with: (a) construction and/or operation of facilities or other business practices in the program; (b) exposure to toxic chemicals, hazardous wastes, and other dangerous goods under the program; (c) reconstruction or rehabilitation of infrastructure in areas prone to natural hazards.
- Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists the affected people in improving or at the minimum restoring their livelihoods and living standards.
- Give due consideration to the cultural appropriateness of, and equitable access to, program benefits, giving special attention to the rights and interests of indigenous peoples and to the needs or concerns of vulnerable groups.
- Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

The ESSA evaluates the compatibility of the Program's systems with the core principles on two basic levels: (a) the systems as defined by laws, regulations, and procedures (the 'system as defined') and (b) the institutional capacity of implementation entities under the program to effectively implement the system (the 'system as it is applied in practice'). It identifies and analyzes the differences between the national systems and the core principles that apply to the Program on the two levels indicated above. The Program approach excludes any activity that poses a potentially significant environmental and social risk and has diverse, varied, irreversible and unprecedented negative impacts.

The ESSA aims to identify the strengths and weaknesses of the environmental and social system applicable to the Program in order to identify the actions necessary to improve its performance. Specific measures to address the identified weaknesses or gaps and to make the system in line with the PforR core principles are proposed in an ESSA Action Plan, which is an integral part of the Program's Action Plan (PAP).

1.2. Approach for the ESSA

The preparation of the ESSA and the development of measures to strengthen the ESMS have benefited from various desk-based reviews and consultative processes, including the following:

- **Review.** The review focused on national legislation and other relevant regulations and policies in the areas of renewable energy, environment and social issues with a special focus on identified environmental and social aspects relevant to the Program. These included environmental emissions, waste management, recycling, labor and occupational health and safety (OHS), land acquisition, and stakeholder engagement practices and existing grievance mechanisms in implementing agencies. The Bank also reviewed the existing environmental and social management systems (ESMS) of financial intermediaries (Development and Investment Bank of Türkiye [TKYB] and Industrial Development Bank of Türkiye [TSKB]) who will be implementing agencies in the project, and their due diligence and implementation practices in the area of solar PV projects. The following aspects their respective ESMSs were assessed: a) approval process of proposed investments; b) E&S due diligence, screening and risk rating procedures; c) monitoring and reporting of the E&S aspects in approved investments; d) technical capacities of the E&S staff; e) external communication mechanism including a grievance mechanism (GM); and f) staff training and capacity building on E&S aspects.
- **Initial stakeholder consultation meetings.** To develop a better understanding of implementation practices, procedures, standards, and the approach for this Program, in the period from June 2021 to November 2023 the Bank team carried out meetings with various stakeholders including technical staff in the Ministry of Energy and Natural Resources (MENR), TKYB, TSKB and with representatives of commercial banks and leasing companies in Türkiye as well as with business associations working in the area of renewable energy. These initial stakeholder consultation meetings informed key ESSA findings, contributed to formulating the ESSA Program Action Plan, and impacted the design of the Program. Further elaboration on these details can be found in the ESSA report.

- **Formal consultations.** The draft ESSA was initially disclosed in the English and Turkish on December 4, 2023, through the external website of the Bank and website of the World Bank's Country Office in Türkiye, and public comments will be solicited during a period defined and reserved for comments until December 18, 2023.

- The Bank will carry out consultations with stakeholders on the draft ESSA report in a series of targeted meetings in Türkiye between November 30 and December 15, 2023. The draft ESSA report, including Executive Summary, in both English and Turkish, will be circulated prior to the meetings. Observations from the workshops will be incorporated into the final ESSA report and a complete list of participants and a summary of their comments will be included in Annex 5.

- The final ESSA report will be disclosed in the English and Turkish languages on the external website of the Bank.

- Communities and individuals who believe that they are adversely affected as a result of a Bank supported PforR operation, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance redress mechanism or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to the Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of the Bank's non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. Information on how to submit complaints to the World Bank's corporate GRS is available at http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

2. Program Description

The Program Development Objective (PDO) of the proposed PforR is to expand Türkiye's distributed solar photovoltaic market and pilot distributed battery electricity storage.

Türkiye's 2022 National Energy Plan (NEP) outlines an ambitious vision for renewable development and BESS up to 2035 based on the country's 2053 net zero emission target. Per the NEP, Türkiye plans to add 60 GW of solar and wind power by 2035, or an estimated 3.5 GW of solar and 1.4 GW of wind power needs to be added per year. To increase network flexibility, 7.5 GW in BESS is also to be deployed during this period. The proposed PforR operation directly contributes to this goal by enabling an increase in installed solar capacity and by catalyzing market development, including through the development of capacity of financial institutions to finance rapid organic growth in DSPV beyond the program. As of the end of 2022, Türkiye achieved 9.5 GW of installed power capacity for solar energy, and as of April 2023, total solar installed capacity has reached 9.9 GW. This is well in line with the target in the Energy Strategic Plan to reach 10 GW of installed solar capacity by 2023.

The PforR will contribute to the implementation of the NEP, supporting up to 25 percent of the potential DSVP market. About US$22 billion investment would be required to achieve the 2035 target of 52.9 GW for installed solar capacity, including both utility scales and distributed generation. A World Bank and IFC market analysis carried out in 2021 showed the potential for the DSPV market to be a minimum of 4.5 GW by 2030, requiring at least 750 MW of new DSPV per year and US$3.8 billion of financing. Most investments will come from local RE developers, consumers, and financial institutions. MENR's Strategic Plan also noted that measures must be taken to develop financing facilities and incentives for RE and energy storage systems investment to materialize their high potential. Therefore, market mechanisms supported under the PforR will be essential to achieve the program target by addressing market failures and unlocking commercial financing.

The proposed PforR will focus on unlocking private sector investments and innovation in DSPV and BESS, thereby contributing to the achievement of the GoT's solar PV and BESS targets. Specifically, the proposed Program will focus on two results areas:

(c) **Results Area 1 - Scaling-up distributed solar PV.** Investments will support the installation of grid-connected distributed solar PV systems. The DSPV systems could include rooftop solar photovoltaic (RSPV) and ground-mounted solar PV, as well as newer technologies such as facade PVs and floating PV. The systems installed will be primarily for self-consumption, eligible for net metering[5] and connected to the distribution grid. This results area targets the C&I market segments, which are essential to create the broader market ecosystem for DSPV. The eligible sub-borrowers include DSPV customers, DISCOs, leasing companies, and aggregators who own, operate, and maintain the DSPV systems for customers to supply electricity to C&I buildings.

(d) **Results Area 2 - Expanding the market and promoting innovation for distributed energy, including BESS.** This will help unlock commercial financing at scale for DSPV and support innovation for BESS. Under this results area: (i) the two Program Implementing Agencies (PIA) will set up a facility to finance commercial banks selected transparently and competitively; and (ii) these commercial banks will finance DSPV projects, including through their own financing. A recipient-executed grant of US$3 million from the Energy Sector Management Assistance Program (ESMAP) will be disbursed against

[5] Only distributed PV subprojects that qualify for 'unlicensed' electricity production pursuant to the 'Unlicensed Electricity in the Electricity Market Production Regulation' No. 30772 published in the official gazette on May 12, 2019, and its subsequent amendments will be eligible for financing under the Program.

the DLI for establishment of the facility. Separately, a Clean Technology Fund (CTF) US$30 million credit will support BESS investments financed by the PIAs, having an important demonstrational effect for the market and the broader banking industry. Eligible sub-borrowers for battery storage include renewable developers, battery storage companies, aggregators, and DSPV consumers.

Table 1. Program Disbursement Linked Indicators

DLIs	**Description of DLIs**	**Disbursement Amount (US$, millions)**
Results Area 1: Scaling up distributed solar PV (DSPV)		
DLI 1. Commitment and disbursement of Sub-loans to Sub-borrowers for DSPV Sub-projects under Stage 1 of the Program.	Sub-loans from PIAs to sub-project borrowers for DSPV.	145.0 (per PIA)
DLI 2. Achievement of generation capacity (MW) under DSPV Sub-projects financed by Sub-loans.	Generation capacity from DSPV sub-projects financed with PIA sub-loans.	56.25 (per PIA)
Results Area 2: Expanding the market and promoting innovation for distributed energy		
DLI 3: Increase awareness and knowledge of the facility for DSPV Subprojects under Results Area 2.	Establishment of a transparent and inclusive facility by the PIAs (TSKB and TKYB) through which they finance Facility Borrowers (FBs) to on-lend to sub-project borrowers for DSPV investments. Delivery of two (2) awareness workshops to potential Facility Borrowers on the facility for DSPV Subprojects under Results Area 2.A. Delivery of four (4) training seminars to Facility Borrowers on the facility for DSPV Subprojects under Results Area 2.A.	22.5 (IBRD) (per PIA) 3.0 (ESMAP)
DLI 4: Commitment and disbursement of Facility Loans to Facility Borrowers to finance Facility Sub-loans for DSPV Sub-projects.	Signed Facility Loan Agreements between PIAs and Facility Borrowers.	65.0 (IBRD) (per PIA)
DLI 5: Achievement of generation capacity (MW) under Facility Sub-loans.	Sub-loans disbursed to sub-borrowers to finance DSPV investments.	22.5 (IBRD) (per PIA)

DLIs	Description of DLIs	Disbursement Amount (US$, millions)
DLI 6: Commitment and disbursement of Sub-loans to Sub-borrowers for BESS Subprojects.	Sub-loans disbursed to sub-borrowers to finance BESS investments.	10.0 (CTF)
DLI 7: Achievement of Battery energy storage capacity (MWh) under BESS Sub-projects financed by Sub-loans	Installed BESS capacity (MWh) financed in subprojects. Eligible types of battery storage include generation, transmission, distribution grids, and consumers.	5.0 (CTF) (per PIA)

2.1 Scope of the Program

The geographic coverage of the PforR operation will be nationwide in line with the Government program. The Program will include installation on rooftop PV solar, ground mounted (distributed solar PV) and BESS for industrial and commercial market segments ; around 20 percent of fund allocation will target untapped market segments such as MSMEs. All installed solar PV and BESS capacity is intended for self-consumption. The duration of the PforR Program will be five years, with the expected start in 2024 and the target completion in 2029. A new MENR strategic five-year plan for the period of 2024-2028 is under development and will be effective with enhanced targets for renewable energy and ambitious goals for climate change mitigation upon the completion of the current program period.

The borrowers and Program implementing agencies are TSKB and TKYB, who will on-lend IBRD loans to Distributed Solar PV (DSPV) customers, developers and aggregators. The two PIAs are responsible for achieving the DLIs under Result Area 1 and 2. The detailed eligibility criteria for other financial intermediaries (facility borrowers) who will join the Program in the second phase will be outlined in the Program Operational Manual (POM), and will include a requirement for ESMS and adequate capacity to manage E&S impacts.

Additional implementing agencies are the Ministry of Energy and Natural Resources (MENR), Energy Market Regulatory Authority (EMRA). MENR will provide overall policy guidance and play a key role in coordinating with the financing institutions and ensuring that the results and lessons from this PforR Program are incorporated internally and factored into future planning and strategy for renewable energy generation. Further, MENR and EMRA are responsible for improving the policy and regulatory frameworks for distributed solar PV and BESS. MENR has the overall oversight of the RE policies and targets. EMRA is responsible for preparation of secondary legislation, setting out the pricing principles for regulated tariff and its approving, drafting, amending, enforcing and auditing performance for standards, distribution and customer services code.

2.2 Beneficiaries of the Program

The direct beneficiaries are (a) DSPV customers who can benefit from reduced energy costs by installing DSPV systems; (b) the national government, particularly MENR and EMRA, which are responsible for advancing the RE agenda and its regulation; (c) commercial banks whose awareness, capacity, and financing will be increased; and (d) aggregators, equipment manufacturers, service suppliers, and project developers who are engaged in DSPV services and operations. Indirect beneficiaries include the general public with an improved environment (for example, reduced air pollution) as a result of RE use, and the global community, including through climate change mitigation.

3. Anticipated Environmental and Social Effects of the Program

The PforR Program will have positive environmental and social impacts, such as reduction in local pollutants and GHG emissions, and improved access to renewable energy sources. The Program will contribute to strengthening of the policy framework, and institutional capacity of participating financial institutions. Overall, environmental and social risks and impacts associated with the Program are assessed as Moderate.

The main social and environmental risks and impacts are associated with the Results Area 1 and 2 supporting installation of rooftop and ground-mounted solar panels and battery energy storage systems (BESS), for commercial and industrial self-consumption (Results Area 1) and untapped market (eg. MSMEs self-consumption) (Results Area 2). Rooftop and ground-mounted solar panels PV and BESS will have certain environmental adverse risks and impacts such as: (i) waste management due to the construction/installation, maintenance operation and decommissioning (disposal/recycling of not-in-use solar panels) and decommissioning (ii) dust and noise due to construction/installation works, (iii) sanitary wastewater management, (iv) road/traffic safety considering construction vehicles and solar PV transportation, (v) occupational health and safety risks for workers engaged in construction/installation/operation works such as working with high voltages, electrical equipment, direct current, working at heights, heavy lifting and potential fire/explosion and chemical hazards, (vi) community health and safety risks during installation, operation and disposal of not-in-use solar panels and other electric equipment needed for rooftop solar PV (RSPV), ground-mounted solar PV and BESS, and during construction of distribution lines for Associated Facilities (AF); these may include potential fire/explosion, traffic safety, construction and maintenance activities in and around the settlements, (vii) resource use in terms of energy, water and raw materials and (viii) land clearance for installation of ground-mounted solar PV and BESS and AF – distribution lines to connect the ground-mounted solar PV with the distribution network. Potential social risks and impacts include (i) potential need for land acquisition for installation of ground-mounted solar PV and BESS; (ii) temporary land use restriction during the construction/installation of the AF – distribution lines to connect the ground-mounted solar PV with the distribution network and (iii) community health and safety risks during installation, operation and disposal of RSPV, ground-mounted solar PV and BESS, and during AF distribution lines construction. The likelihood for the need to construct last mile low voltage distribution lines is assessed as low to moderate, and may occur in few cases. Thus large civil works are not expected within the scope of the Program. It is expected that the land will be acquired on a willing buyer – willing seller basis, with private parties (land owners and private companies) involved in these market-based transactions. Risks related to cultural heritage and biodiversity sensitive areas impacts are not expected, because investments with such impacts will not be eligible for financing under this PforR. TKYB's and TSKB's ESMS (discussed in chapter 4) will screen for such risk and impacts and eliminate them for Program eligibility. Overall, impacts caused by the activities under Results Area 1 and 3 are likely to be short term and site specific and can be mitigated by applying national laws and requirements of TKYB's and TSKB's ESMS. Solar PV installation works will be carried out by licensed companies specializing in PV installation.

Under Results Area 2, TSKB and TKYB will on-lend to other financial intermediaries (FIs) to reach the untapped market segments. At the moment, these FIs are not known. Other FIs without an adequate environmental and social management system to meet the E&S requirements defined for the Program will not be included. The POM will include clear eligibility criteria for PFIs including a requirement for ESMS procedures.

The environmental and social risks under the PforR are expected to be moderate because the Program design will limit impacts, and the Government of Türkiye and the Program implementing agencies have largely well-established and functional environmental and social regulatory and institutional frameworks in line with the core principles of the World Bank policies. Since the PforR instrument cannot finance any investments associated with High risk and adverse impacts, the eligibility criteria for financing in the Operation Manual specifically excludes this kind of investments.

The Program has substantial environmental and social benefits including:

- Improvement of energy resilience and efficiency and the increased use of clean electricity from renewable sources.
- Reduction of global emissions of CO2 due to energy-efficient clean electricity from renewable sources.
- Public health benefits caused by reduced air pollution emissions.
- The substantial economic boost associated with renewable energy
- Increased environmental awareness among the public.

3.1 Main Environmental Effects of the Program

Potential environmental impacts for investments to be financed under the Program are not expected to be significant since subprojects with high environment and social risks will not be included in the Program. Screening will be carried out for each sub project and based on initial screening, sub projects will be finalized for funding.

Potential environmental risks and impacts identified through the ESSA relate to: (i) waste management due to the construction/installation, maintenance, operation and decommissioning (disposal/recycling of not-in-use solar panels) and decommissioning (ii) dust and noise due to construction/installation works, (iii) sanitary wastewater management, (iv) road/traffic safety considering construction vehicles and solar PV transportation, (v) occupational health and safety risks for workers engaged in construction/installation/operation works such as working with high voltages, electrical equipment, direct current, working at heights, heavy lifting and potential fire/explosion and chemical hazards, (vi) community health and safety risks during installation, operation and disposal of not-in-use solar panels and other electric equipment needed for rooftop solar PV (RSPV), ground-mounted solar PV and BESS, and during construction of distribution lines for AF; these may include potential fire/explosion, traffic safety, construction and maintenance activities in and around the settlements, (vii) resource use in terms of energy, water and raw materials and (viii) land clearance for installation of ground-mounted solar PV and BESS and for AF – distribution lines to connect the ground-mounted solar PV with the distribution network.

These risks and impacts can be managed and mitigated with standard mitigation measures. The disposal of damaged or discarded panels may require additional mitigation measures in instances when these are not covered under the take-back policy with the manufacturer/supplier during replacement. In case take-back policy is not available or cannot be ensured throughout the life cycle, recycling will be considered through waste licensed waste management companies. As an ultimate solution the discarded or damaged panels should be disposed off as per the local laws on the disposal of hazardous wastes. In particular, potential fire and explosion risks and environmental hazards related to the disposal of used batteries containing hazardous waste will be mitigated via risk management measures that will include product specifications and “cradle to grave” provisions in the contracts of supplier for batteries used in the BESS and solar panels in accordance with GIIPs.

As a result, all investments to be covered by the Program will have potential Environment, Health and Safety (EHS) issues which are (a) small or modest in intensity, (b) of limited duration and extent, (c) mostly completely reversible, and (d) readily mitigated to acceptable levels with standard cost-effective measures commercially available in the country and internationally recognized best construction practices in addition to national legislation requirements. In general, proposed investments are small construction and maintenance where the incremental effects are clearly identified to be moderate and are readily known. Potential investments will not encroach or degrade sensitive habitats, be located in sensitive areas of biodiversity value, or located in areas protected for physical tangible cultural resources.

Table 2. Environmental Risks and Impacts

Impacts	Assessment	Risk	Mitigation
Disturbance or damage of habitats, biodiversity, or cultural resources	The Program will not finance any activities which have the potential to directly or indirectly affect natural or critical habitats and tangible or intangible cultural resources. Such sub-projects will not be eligible for financing	Null	NA
Large use of land, water, energy and other natural resources	The Program will support solar panels installation works. Solar panels may also need water for cooling and cleaning. Water may also be used for dust suppression during panel transportation and installation.	Low	The anticipated water usage and wastewater generation are expected to be managed efficiently under related national legal framework. Existing infrastructures will be used for water supply and wastewater management during construction/installation and operation phases.
Environment pollution from heavy emissions, discharges and solid waste	The Program will not support any activities causing environmental pollution with heavy emissions, liquid discharges, or large amounts of solid waste. However, the increased use of solar PV panels can result in growing volumes of PV waste after the end-of-life PV use (30 years).	Moderate	The limited air and noise emissions during construction are expected to be managed efficiently under related national legal framework. The disposal of damaged or discarded panels will be through the manufacturer/supplier take back policy. If not, recycling will be

			considered through waste licensed waste management companies. Disposal of used batteries containing hazardous waste will be mitigated via risk management measures that will include product specifications and "cradle to grave" provisions in the contracts of supplier for batteries used in the BESS and solar panels in accordance with GIIPs.
Threat to the health and safety of workers and communities	There is a certain risk of worksite occupation health and safety incidents/accidents is associated with solar PV panels installation works. Dust and noise can be generated during solar PV installation activities in residential areas. Presence of contracted workers is also expected. Working at height and working with electricity are some of the other OHS hazards.	Moderate	PV installation companies will be required to comply with national OHS regulation and relevant industry safety standards. The national OHS legal framework aligned with international requirements. Installation activities will be caried out in permitted time slots according to the regulation. There will be limited number of workers present, contracted by licensed PV installation companies
Environmental noise level	Noise due to installation works activities, especially sub-projects at the residential areas.	Moderate	Program activities will comply with national regulation on environmental noise management for the construction activities

Loss of vegetation associated with land clearance and levelling	Loss of habitat, disturbance on flora and fauna elements, as a result of land clearance for the installation of the ground-mounted PVS, BESS and associated facilities- distribution lines	Low	Selection of project land location at biodiversity sensitive locations (defined by legislation) will be eliminated as per the national legislative requirements. TSKB and TKYB ESMS will screen out sites of sensitive biodiversity characteristics[6].
Management of hazardous wastes including transformer oil	The hazardous wastes including transformer oil (for plants including transformers) would be produced during the operation of the Solar PVs.	Low	National legislation framework is in line with global requirements for the management of hazardous wastes
Fires at BESS	Fires at BESS would require specific emergency response and firefighting equipment.	Moderate	The appropriate emergency response system would be installed in accordance with legislation and be screened by TKYB and TSKB ESMS
Pesticide use	There is a potential of use of pesticide for the site clearance.	Low	Turkey ratified the Rotterdam Convention on the Prior Informed Consent for Certain Hazardous Chemicals and Pesticides in International Trade. There is a list of banned pesticides by legislation.
Management of hazardous materials including BESS chemicals	There is a risk chemical leak at BESS plants.	Low	National legislation framework is in line with global requirements for the management of hazardous materials

[6] As such but not limited to Important Natural Areas (ODA defined by Nature Association, Important Bird Areas, Bird Migratory Routes, Wetlands,

Recycling of PV Panel that are damaged or at the end of life	The amount of Solar PVs to be disposed will be at considerable amounts during the implementation of the program the impacts of which could be minimized through recycling.	Moderate	The waste management legislation in the country does not have specific requirements for the recycling of the solar panels. Solid waste management and recycling infrastructure, including facilities for the disposal of waste have room for improvement especially for the disposal of not-in-use solar panels and BESS. TSKB/TKYB has proposed approaches to be implemented during the Program for the enhancement of the GIIP for the recycling of the solar panels among the users and manufacturers.
Recycling of BESS units at the end of operational life	BESS units contain chemicals that would need to be recycled to minimize their harmful environmental effects	Moderate	There is national regulation on the Recycling of Waste Batteries and Accumulators. However the implementation of the requirements of this regulation in relation to BESS is not yet established .

3.2 Main Social Effects of the Program

The overall objective of Program-financed activities is scale up the market and improve the enabling policy environment for distributed solar PV, thereby contributing to decarbonization. The activities financed under the Program will include construction and installation works of limited scale which will not cause the relocation of people, initiate a labor influx, or cause adverse impacts on communities. The Program is expected to create a wide range of social benefits including public health benefits caused by reduced air pollution emissions, increased environmental awareness among the public, and increased access to renewable energy. The Program is not anticipated to cause adverse effects on gender, vulnerable and disadvantaged groups, poverty, and equity. It is anticipated that the Program will

strengthen the market access to the renewable sources of energy by normally underserved market segments such as MSME consumers.

Consultations with beneficiaries are part of the Program design. During Program preparation consultations with numerus stakeholders including business associations, financial intermediaries and solar power users have been carried out. These consultations also informed the design of the Program.

The main social risks associated with the Program are related to ESSA Core Principle #3 and #4 notably to the issues of workers and community health and safety, and land acquisition issues associated with activities under the Results Area 1 and 2. Potential social risks and impacts include (i) potential need for land acquisition for installation of ground-mounted solar PV and BESS; (ii) temporary land use restriction during the construction/installation of the distribution poles and lines to connect the ground-mounted solar PV with the distribution network and (iii) community health and safety risks during installation, operation and disposal of RSPV, ground-mounted solar PV and BESS, and during distribution poles and lines construction; (iv)contextual risks associated with child and forced labor risks in the supply chain of PVs, which will be addressed in the procurement process. The likelihood for the need to construct last mile low voltage distribution lines is assessed as low to moderate, and may occur in few cases. Thus large civil works are not expected within the scope of the Program. It is expected that the land will be acquired on a willing buyer – willing seller basis, with private parties (land owners and private companies) involved in these market-based transactions. It is anticipated the solar panels will be located on a low productivity land which is not used for agricultural purposes. Should there be a need for land expropriation, TSKB and TKYB will screen those impacts and provide a notification to the World Bank, prior to any land expropriation. Only land where there is no presence of informal users and no impacts on livelihoods will be eligible for expropriation. Therefore, overall social risk of the Program is assessed as moderate.

The use and handling of personal data is not anticipated to be a risk within the scope of the Program. Personal data to be collected under the activities financed by the Program will be used and managed in line with the national law on personal data protection.

Table *3* summarizes the risks related to the Program's social effects according to the Bank Policy Program-for-Results Financing.

Table 3. Social Risks and Impacts

Impacts	Assessment	Risk	Mitigation
Involuntary resettlement	The Program activities may require land acquisition for associated facilities such as low voltage distribution poles and lines; however, no involuntary resettlement will occur under the Program.	Null	The Program eligibility criteria will exclude activities causing physical displacement of people.
Expropriation of land and private property	While the majority of Program supported activities will take place within existing land perimeters, the installation of ground mounted solar PV may require purchase of land on willing-buyer willing seller basis under the laws	Low	TKYB and TSKB ESMSs will include screening of any private land purchase and expropriation under the Program to ensure it

	regulating land purchase market transactions between private entities. There may be exceptional instances where private land expropriation may be required for the installation of poles for the distribution lines.		was caried out in line with national laws on private market transactions, and in line with national expropriation law. The Program will minimize investments requiring expropriation of private lands.
Restricted access to goods, services, natural resources and loss of income	The Program will not support activities which would cause restricted access to goods, services, or natural resources.	Null	The eligibility criteria to be implemented by TKYB and TSKB will include avoidance of livelihood impacts as a result of land acquisition.
Child and forced labor	While the Program will not involve any activities which may risk the use of child or forced labor, there is a risk of forced labor in the supply chain of solar panels.	Low	The Program will include requirements for TSKB and TKYB to include forced labor declarations and prior review in the procurement process of solar panels.
Inadequate equitable access to Program benefits by vulnerable and disadvantaged groups	The Program supported activities will not adversely impact any vulnerable and disadvantaged groups.	Low	Program will include awareness raising activities on accessing financing for solar panels.
Avoid exacerbating social conflicts, especially in fragile states, post-conflict areas, or areas subject to territorial disputes	Türkiye is not considered a fragile state or a post-conflict zone. Therefore, this core principle is not applicable to the Program.	Null	NA

This ESSA assesses the adequacy of the country's environmental and social management system in relation to the specific activities under the Program – namely, issues related to occupational health and safety, land acquisition, waste management, recycling, and pollution.

3.3 Previous Experience of Institutions Involved in the Program

Institutions involved in the Program have a history of collaboration with the Bank. Both TSKB and TKYB are experienced borrowers with high implementation capacity and have prior experience with the implementation of World Bank-financed Investment Project Financing (IPF) projects. Both TSKB and TKYB have existing Project Implementation Units (PIUs), staffed with qualified personnel for implementation of the project and carrying out all fiduciary and safeguards requirements of the World Bank. TKYB is currently implementing Formal Employment Creation (P171766) and Emergency Support Firm Project (P174112) and Geothermal Development Project. All projects have satisfactory or moderately satisfactory environmental and social performance. TSKB is currently implementing Geothermal Development Project, which have satisfactory rating and recently satisfactorily completed implementation of Inclusive Access to Finance Project (P163225).

4. Assessment of Borrower's Environmental and Social Management Systems

The Program will rely on the Borrower's ESMS to ensure that any potential adverse environmental and social impacts are adequately identified, avoided, or mitigated. The ESMS aims at preventing and mitigating potential negative effects from the Program activities on the population and environment, including:

- Screening and monitoring of environmental and social risks and impacts;
- Potential impacts on the health and safety of workers and communities as a result of construction and installation works;
- Underdeveloped mechanisms and infrastructure for waste management and recycling;
- Land acquisition; and
- Potential lack of consultations with affected people and grievance management.

The ESMS includes the following:

- Regulatory and legislative framework;
- Institutional arrangements and institutional capacity to identify environmental and social risks, and to implement, monitor, and follow up on the evaluation of mitigation actions;
- Grievance mechanisms including the procedures and tools for affected people to resolve disputes; and
- Monitoring and evaluation.

It is the responsibility of the Borrower to implement the ESMS and ensure compliance with the proposed mitigation actions.

Table 4 summarizes the assessment of the consistency of the Borrower's ESMS with Core Principles in the PforR Policy.

Table 4. Assessment of the consistency of the Borrower's ESMS with Core Principles in the PforR Policy

Core Principle	Consistency with Borrower's ESMS and main gaps
1. Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.	The Environmental Impact Assessment (EIA) Regulation of Türkiye provides a general framework for environmental management in the country for project development above certain capacity. The recent amendment of the EIA Regulation covers social aspects including social assessment and need to prepare stakeholder engagement plans for Annex 1 projects. The regulation follows the main principles of the European Union (EU) and good international practice. Hence, it is aimed at promoting sustainable development and public participation in decision-making. The EIA Code requires screening, scoping, avoiding, minimizing, and mitigating adverse E&S impacts of the proposed activities as well as compensating for the residual impacts. The roof-top solar PV plants are excluded of the EIA Code. Only ground-mounted solar PV projects to be included in this Program will be triggering the Annex 2 of this Code (as these are with land requirement less than 20 ha and capacity smaller than 10MWm) and such projects will need to prepare a Project Presentation File (a report for screening and preliminary assessment of environmental impacts).
2. Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.	This Core Principle is relevant for this PforR. The Program will not finance activities which may have impacts on critical natural habitats and physical cultural resources. The proposed projects with impacts on critical biodiversity and physical cultural resources impacts will be ineligible for Program financing. TSKB and TKYB ESMS screening will ensure exclusion of activities ineligible for PforR financing, in line with this principle.
3. Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals,	This Core Principle is relevant for this PforR. The Program activities include limited construction activities that may include the public and worker safety risks. National regulation on labor and OHS is aligned with good international practice. However, enforcement of OHS regulation is

hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.	lagging in practice. TKYB's and TSKB's ESMS require compliance with national laws, including on labor and OHS. In absence of enabling regulation, there are not enough recycling facilities for the solar panels in number and competency in Türkiye. More facilities may emerge with future regulatory requirements on recycling solar panels and economically viable recycling processes.
4. Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.	This Core Principle is relevant for the Program. The Program will include activities which may require land acquisition, as voluntary market-based transactions While national expropriation procedures provide for market-based compensation of land loss, the national law does not recognize the rights of informal users. It is also lagging in the area of livelihood restoration, identification of vulnerable groups and consultations with affected parties.
5. Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable and disadvantaged groups.	Recently amended EIA Code requires social assessments of proposed projects for projects in the Annex 1 list. Such projects also require preparation of SEPs. Türkiye also relies on other laws and policies to guide and prevent potential social impact in proposed projects. TKYB and TSKB ESMS also include requirements for stakeholder engagement and screening of impacts on vulnerable groups and communities. In the context of this Program, it is relevant that the government provides low-income energy consumers subsidies to access the energy. This is regulated through national decrees and secondary regulation.
6. Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	This Core Principle is not relevant for the Program. The activities shall not take place in a fragile state or in areas subject to territorial disputes.

4.1 Overview of the Environmental and OHS Legal Framework

The overview of the environmental and OHS legal framework is provided below with a more comprehensive list of legislative documentation in Annex 3.

Environmental Protection and Prevention of Pollution

Environmental Law No. 2872 (1983): The Turkish Environmental Law aims for the provision of protection of environment as a common asset of living resources in line with sustainable environment and development principles. The Law presents the framework for environmental legislation, penalties in case of breech and administration. The Law includes the general rules and prohibitions for the protection of the environment and arrangements for the establishment of the environmental fund. The Law lists the general principles for the protection and rehabilitation of the environment and prevention of pollution. Some of the environmental values mentioned as part of these general principles are the principle of polluter pay, sustainable development, participation right of community members, efficient uses of resources and energy, waste minimization at source and recycling, battle against climate change and etc.

Regulation on Environmental Impact Assessment (Latest amendment 29.07.2022 Official Gazette No: 31907): This regulation defines technical and administrative principles to be followed during the process of Environmental Impact Assessment (EIA). The regulation lists projects subject to the requirements of the regulation in two Annexes. Projects listed under Annex-1 of the Regulation on Environmental Impact Assessment are subject to the requirements to prepare a full-scale EIA Report. Projects listed under Annex-2 are subject to the requirement to prepare a Project Presentation File (A report for screening and preliminary assessment of Environmental Impacts). As for the relevancy of the requirements to the PforR **:** Annex-1 includes solar power plants with a project area of 20 hectares and above or with an installed capacity of 10 MWm and above, transmission lines of 154 kV and over, and of 15km in continued length and above**.** Annex-2 includes solar power plants with a project area of 2 hectares and above or with an installed capacity of 1 MWm and above (excluding roof and facade systems) and transmission lines of 154 kV and over, and of 5km in continued length and above. Though the individual investment projects under this PforR are small in nature and distributed over the country, they might trigger EIA Regulation Annex 2 requirements for the ground mounted solar PVs. As the investment projects will not include transmission lines but only the distribution lines the EIA Regulation would not be triggered for the associated facilities-connection lines (distribution lines).

Recently amended EIA Regulation (July 2022) requires the preparation of cumulative impact assessment and environmental and social action plan. The environmental and social action plan is required to include (i) environmental monitoring plan and (ii) sustainability pan (including sub-management plans such as zero waste plan, traffic management plan, greenhouse gas reduction plan, environmental and social management plan, etc.). The recent regulation amendments also require that projects which fall into Annex-I prepare subproject specific SEPs that will be annexed to the EIA application file.

Environmental Permitting

Regulation on Environmental Permit and License (Latest amendment 16.10.2021 Official Gazette No: 31630): This regulation describes the processes for the environmental permits and licenses listed in the Environmental Law. In that respect, an environmental permit covers issues such as air emissions, environmental noise, deep sea discharge and hazardous waste discharge. Activities deemed to have the greatest environmental pollution impacts (listed under Annex 1) must obtain an environmental permit from the Ministry. Activities deemed to have a less polluting impact (which are listed under Annex 2) must obtain a permit from the Provincial Directorates. Solar Roof-Top PV panels are not subject to the

Environmental Permit regulation. However, if there is wastewater generation during construction then either connection permit to an existing sewer system or a discharge related environment permit is required.

Wastewater

Regulation on Water Pollution Control (31.12.2004 Official Gazette No: 25687): This Regulation covers the quality classifications and usage purposes of water environments, planning principles and prohibitions regarding the protection of water quality, discharge principles and discharge permit principles of wastewater, principles related to wastewater infrastructure facilities, and monitoring and inspection procedures and principles to prevent water pollution. If during construction activities, a wastewater discharge is necessary to a receiving water body, the discharge and possible treatment should be carried out in line with the regulation requirements.

Facilities which discharge wastewater into the sewage system must obtain a wastewater connection certificate from the relevant municipality's Wastewater Substructure Facilities under the relevant municipal regulation. An environmental permit does not cover wastewater emission into the sewage system. If there is wastewater generation during construction, then either connection permit to an existing sewer system or discharge related environment permit is required.

Occupational Health and Safety

Occupational Health and Safety (OHS) Law No: 6331 (2012): The law includes all workplaces and workers, including civil servants, workers at private enterprises and the self-employed workers, regardless of the number of employees or the kind of work. The OHS Law regulates the duties, authority, responsibilities, rights and obligations of employers and employees in order to ensure occupational safety and health in the workplace and to improve the existing safety and health conditions. The ultimate aim of the OHS Law is to prevent occupational diseases and accidents, and other physical and mental health problems of the workers related to work and the work environment. Since OHS law is including all workplaces, the activities of the Program in the form of employee – employer concept is subject to the OHS Law.

Article 4 of the Law defines the duties, authority and responsibilities of the employer and workers. As per Article 4, the employer has a duty to ensure the safety and health of workers in every aspect related to work. In this respect the employer shall take the measures necessary for safety and health protection of workers, including provision of necessary organization, designating safety and health staff, informing and training of workers, carrying out risk assessment, implementing measures related to occupational safety and health in accordance with the legislation, etc.

There are specific regulations on describing the details for implementation of the requirements listed in the Law.

The OHS Law requires employers to compulsorily employ an Occupational Safety Expert (OSE). There are three classes of occupational safety experts: Class A, B and C. Therefore, the education and training programs for the OSE candidates are organized for each of the three expert classes. OSEs having A-B class can be employed at very dangerous, and dangerous workplaces, while those with C class certificates can work at less dangerous workplaces.

In order to provide occupational safety and health services; the employer may designate an occupational safety expert and occupational physician from among the employer’s staff and may designate other health personnel at workplaces classified as very dangerous with ten or more workers, or may provide such services by obtaining the whole or part of such services from the Joint Occupational Safety and Health Units.

4.2. Overview of the Social Legal Framework

Labor and Working Conditions

Turkish Labor Code No. 4857 (2003) to large extent provides for protections of workers in line with international requirements, including World Bank Environmental and Social Standard ESS2: Labor and Working Conditions. Türkiye ratified all the four Core International Labor Organization (ILO) Conventions and OHS ILO Conventions. The main gap with good international standards including ESS2 is related to the requirement for the grievance mechanism for workers. While the national legislation provides for Labor Courts to raise labor rights concerns, the Labor Code does not include specific requirements for workplace grievance mechanism.

The law prohibits persons under the age of 18 years from working in hazardous occupations. The minimum working age in 15 years. Forced labor is prohibited by the Turkish Constitution. The Labor Code includes provisions for the minimum wage and sets maximum weekly hours as 45 hours, not exceeding 11 hours daily. The annual limit for overtime work is 270 hours. Overtime hours are paid 1.5 times the normal hourly rate, or 1.25 times for part-time employees. Employees may choose to receive 1.5 times the amount of overtime work as time off in lieu of financial compensation for overtime. Workers are entitled to one paid rest day per week. The law mandates paid holiday and leave, and paid maternity leave. The law provides for the prohibition of discrimination in employment based on language, race, sex, political opinion, philosophical belief, and religion. Employment may not be terminated on the grounds of race, color, sex, marital status, family responsibilities, pregnancy, birth, religion and political opinion. The Labor Code includes provisions to ensure contracted workers are paid.

Türkiye ratified core ILO conventions including those prohibiting child and forced labor. The Constitution of the Republic of Türkiye prohibits forced labor (Article 18).

Criminal Code Law No. 5237 (2004) treats forced labor and human trafficking as criminal activity. Articles 80 and 117 provide for penalties for engaging in forced labor and human trafficking including trafficking of children. The code sanctions forced labor and human trafficking with eight to twelve years of imprisonment.

Land Acquisition and Resettlement

Expropriation Law No. 2942 (1983), as amended with the Law numbered 4650 (2001), states that in cases of public benefit, public institutions are entitled to entirely or partially expropriate immovable properties in private possession, on the condition that the real value of those immovable properties is paid in advance and in cash to rights holders. Landowners with legal or legalizable claims are eligible for compensation, while informal users, squatters, tenants or users of communal and public lands are not eligible for compensation. Valuation is largely determined based on market value. The law does not have provisions for specific assistance to vulnerable persons, transitional support and livelihood restoration. The law mandates that affected persons are provided timely and relevant information in writing and allows for broader consultations. In practice, systematic stakeholder engagement and consultations are limited. The Annex 5 provides details of the expropriation procedure.

Land Registry Law No 2644 as well as the Turkish Constitution regulate willing buyer – willing seller market transactions for land in Türkiye. Under the PforR, in cases where additional land may be required for the installation of solar PVs, the installers and the solar PVs end-users would need to come to an agreement about the amount of land required and the desired ownership structure. Unlike in some other countries, a simple contract between two parties that is not registered at the Land Registry Office or is only registered by an official Notary Office is not valid under Turkish law for the transfer of ownership (sale or easement).

After the seller and the buyer reach an agreement on the price of purchase or easement, the owner/seller (or their legally designated representatives) make a preliminary application at the Land Registry Office with jurisdiction over the land parcel, with the current title deed of the property, personal identification and a property valuation document issued by the municipality which collects the real estate tax on the property. After the preliminary application, the Land Registry Office reviews the property to ensure that there is no limitation or dispute over the property. If satisfied, the Office provides the owner/seller with an appointment time for the transaction to take place. During the transaction, both parties (or their legally designated representatives) need to be present at the Land Registry Office.

During the appointed transaction time at the Land Registry Office, government officials ask both parties whether they are willingly giving their consent to the sale, record the sale, and deliver a proof of ownership (title deed/***tapu in Turkish***) to the buyer. There is no legal requirement for the payment method s delivery. The sale price funds may be deposited in and escrow account during this process; or it may be delivered in cash by ; or it maybe deposited to the seller's bank account during/before/after this process.

For the sale to be registered and the proof of ownership to be issued, both the seller and buyer have to pay a title deed fee (2% of the sale price, with sale price not being lower than the property valuation issued by the municipality).

Overview of Stakeholder Engagement and Grievance Mechanisms at the National Level

Stakeholder Engagement

Projects subject to **Regulation on Environmental Impact Assessment (Latest amendment 29.07.2022 Official Gazette No: 31907)** are required to carry out public consultations. The projects in Annex 1 list are required to prepare subproject specific SEPs that will be annexed to the EIA Application File. In addition, relevant ministries conduct a series of public consultations to raise the awareness of the public and to receive their feedback on the preparation and adoption of critical regulations, although such consultations are not compulsory.

Grievance Mechanism

Law on the Right to Petition 3071 (1984) and **Law on the Right to Information 4982 (2003)** form the basis for the Presidency's Communication Center (CIMER), the national level grievance mechanism. CIMER operates under the Presidency's Directorate of Communications and serves as the official state tool to receive requests, complaints, compliments and inquiries for information from the public. The applicants can communicate their requests (such as suggestions, complaints, compliments, inquires for information or whistleblower complaints) to the Presidency through the online CIMER system (www.cimer.gov.tr), via the call center ALO 150, through letter/fax or in person. CIMER has a detailed manual in Turkish for its users (available at https://cimer.gov.tr/50sorudacimer.pdf).

The requests submitted to CIMER are distributed amongst the authorized staff for review and referral to respective authorities. The requests that fall into the following categories are not assessed or referred to any government authority: (i) inquires which do not relate to a specific subject, (ii) inquires with insufficient information, (iii) unclear inquires, and (iv) repeating inquires. The applicant receives feedback explaining the reason for the dismissal of their application.

Through CIMER, applicants can direct their requests directly to the relevant authorities. If the applicants do not know the respective authority to submit their request, they can submit a request to CIMER and CIMER directs the request to the relevant government institution after a preliminary assessment by

authorized staff. If the request is directly submitted to the relevant authority, CIMER does not apply its preliminary assessment for the request. The requests delivered to relevant government authorities are only available to the CIMER focal points of the respective institutions. These focal points evaluate and respond to the requests.

The system only allows anonymous submissions if the request to be submitted is under the category of a whistleblower complaint. An applicant can submit only one request per day. The requests submitted to CIMER are resolved within 30 days. If the applicants do not receive feedback within this time period, they can re-submit their grievance to CIMER or elevate it to the Ombudsman Institution (www.ombudsman.gov.tr).

4.3 Overview of the Financial Intermediaries (FI) Environmental and Social Management System

The main implementing agencies of the PforR for Result Areas 1 and 2 will be financial intermediaries (FIs) – TSKB and TKYB. Both FIs shall be responsible for identifying, appraising, and financing eligible investments that meet the criteria set forth in the POM. Under the Results Area 2, TSKB and TKYB will be on lending to other PFIs, specialized in reaching underserved markets segments such as MSME market segments. These PFIs are not known at this stage. The Program Action Plan will include a requirement for TKYB and TSKB to review the capacity of these PFIs to manage environmental and social risks and impacts associated with the Program. The POM will include clear eligibility criteria for PFIs including a requirement for ESMS procedures and capacity to manage E&S impacts. It is expected that other PFIs will be included in the project after about three years of Program implementation. The Bank will provide review the ESMS of eligible PFIs and provide No Objection. PFIs without an adequate environmental and social management system and capacity to meet the E&S requirements defined for the Program will not be included.

This section summarizes TSKB's and TKYB's Environmental and Social Management Systems (ESMSs) for managing the identified environmental and social impacts associated with Program, including dedicated human resources, and compares these systems with core principles of the World Bank policies. On the basis of this assessment, the Bank and the PFIs will agree on measures and actions to manage any significant gaps in capacity to implement environmental and social management systems. Any measures to address potential gaps in the PFIs' ESMS will be defined in the legally binding Program Action Plan. Some measures may also be included in the eligibility criteria and appraisal guidelines set forth in the POM.

4.3.1. Summary and assessment of TKYB ESMS

Institutional Background. TKYB is a state-owned development bank[7] with the mandate to address financing gaps both though direct lending to mid-caps firms, as well as channeling wholesale funding to banks and leasing companies for on-lending to SMEs. The TKYB has been implementing entity of several World Bank financed projects, including Formal Employment Creation (P171766) and Emergency Support Firm Project (P174112). Within the scope of these Bank-funded projects, TKYB has established project implementation units including staff responsible for environmental and social issues. The Bank assessed the TKYB's E&S performance in these Bank funded projects as satisfactory. TKYB employs a total of 310 (of which 124 women) employees.

TKYB was awarded TSE EN ISO 14001 Environmental Management System Standard in 2010. ISO 9001:2015 - Quality Management Systems and ISO 45001 Occupational Health and Safety Management System have been established in 2021. TKYB started publishing sustainability reports in 2019, and is a signatory of the United Nations Environment Program Finance Initiative (UNEP-FI) Principles for Responsible Banking and of operating principles for impact management under the leadership of the Global Impact Investing Network (GIIN). TKYB's sustainability projects account for 81 percent of its loan portfolio. In 2021, TKYB became the first and only bank in Türkiye that signed Operating Principles for Impact Management led by the International Finance Corporation (IFC). The same year, TKYB published its first Impact Report and mediated the issuance of Türkiye's first Low Carbon Economy Transition Bond and Türkiye's first social *sukuk*. TKYB has the second best environmental, social and governance (ESG) score among Turkish banks, just after TSKB. TKYB has financed 7.5 percent of the country's total renewable energy capacity. TKYB has been implementing World Bank-financed projects in the renewables energy sector. It also has the experience with financing rooftop and ground mounted PV projects – solar energy projects constitute about five percent of its current portfolio.

[7] The MoTF holds a 99.08 percent stake in TKYB.

Environmental and Social Policies and Systems. TKYB adopted its corporate Environmental and Social Management System (ESMS) on January 17, 2020 and has disclosed in-country its Environment and Social Policy on its website on February 6, 2020. The World Bank reviewed the TKYB' ESMS and concluded that it contains all necessary elements as required by respective Environmental and Social Framework[8] (ESF) ESSs, and thus, can be used for the assessment and management of environmental and social risks of sub-projects. Up to date, this ESMS has been applied satisfactorily in the following World Bank financed projects Formal Employment Creation (P171766) and Emergency Support Firm Project (P174112). TKYB revised the ESMS in January 2022 and the World Bank assessed that these revisions did not constitute material changes in comparison with ESS9 requirements.

The ESMS consists of the following elements:

1. Environmental and Social Policy (included in Annex 1)
2. Exclusion List (included in Annex 1)
3. Environmental and Social Risk Evaluation Procedures in the credit process including:
   - Environmental and Social Due Diligence and Risk Screening
   - Environmental and Social Risk Categorization
   - Identification and preparation of appropriate site-specific environmental and social assessment (ESA) instruments, such as Environmental and Social Management Plan (ESMP), Resettlement Plan (RP), SEP, to address site-specific impacts as well as impacts of associated facilities (if any)
   - Requirement for Environmental and Social Action Plan (ESAP) preparation
   - Integration of the ESAP into the credit contract
   - Environmental and social monitoring and annual reporting
   - Roles and responsibilities for ESMS implementation at TKYB
4. Senior Management Commitment – the overall responsibility for the ESMS implementation lies with Executive Vice President, who reports directly to General Manager
5. Environmental and social training process
6. External and internal communication
7. Internal control and management review

Risk Assessment and Categorization. The ESMS includes a four category E&S risk classification including:

Category A: A Project is categorized A if it is likely to have significant adverse environmental and social impacts that are irreversible, cumulative, diverse or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works and may be temporary or permanent in nature.

Category B+: A Project is categorized B+ if it is likely to have significant adverse environmental and social impacts that are mostly temporary, predictable and/or reversible, and the nature of the Project does not preclude the possibility of avoiding or reversing them (although substantial investment and time may be required).

Category B-: A Project is categorized B- if it is likely to have potential adverse risks and impacts on human populations and/or the environment that are not likely to be significant. This is because the Project is not complex and/or large, does not involve activities that have a high potential for harming people or the environment, and is located away from environmentally or socially sensitive areas.

[8] https://www.worldbank.org/en/projects-operations/environmental-and-social-framework

Category C: A Project is categorized C when it is likely to have minimal or no adverse environmental and social impacts.

Table 5. Applicable Standards and Requirements based on Environmental and Social Risk Categories

	High (Category A and B+) E&S risks	**Medium (Category B-) E&S risks**	**Low (Category C) E&S risks**
Applicable E&S Standards for E&S Due Diligence	1. National law, 2. Lenders' E&S Standards: 3. ILO's fundamental principles and rights at work ratified by the country, and 4. Sector sustainability initiatives; and available sector benchmarks (e.g., energy, water use per unit of production).	1. National law, and 2. Lenders' E&S Standards (if no National law or regulation applicable), 3. ILO's fundamental principles and rights at work ratified by the country. Sector sustainability initiatives can also be referred to for background information on E&S issues relevant to the sector in which the Client operates.	1. National law, and 2. Lenders' E&S Standards (if no National law or regulation applicable), 3. ILO's fundamental principles and rights at work ratified by the country.
Minimum Requirements	Compliance with national laws. Compliance with Applicable E&S Standards, as well as the ILO fundamental principles and rights at work.	Compliance with national laws and the ILO fundamental principles and rights at work ratified by the country. Compliance with relevant elements of the Applicable E&S Standards, as well as the ILO fundamental principles and rights at work.	Compliance with national laws and the ILO fundamental principles and rights at work ratified by the country.

TKYB establishes an environmental and social action plan (ESAP) and monitoring program for filling the gaps between the TKYB ESMS standards and existing conditions of the project/client. TKYB's Sustainability and Social Impact Management Department is responsible for carrying out the environmental and social risk assessment procedure. The assessment is a part of the overall project/credit evaluation report. The Credit Committee reviews the environmental and social assessment and, when necessary, meets with the Technical Specialist and/or the Environmental and Social Risk Specialist. The Sustainability and Social Impact Management Department prepares the ESAP documentation to be included in the loan agreement and includes the E&S requirements in the loan agreement. The loan/credit agreements include requirements for the Borrower's compliance with environmental, labor, occupational health and safety

legislations and any other E&S commitments included in the ESAP, including more stringent standards required by the IFIs. TKYB then discusses the ESAP and other required commitments with the client (credit recipient).

Monitoring and reporting. TKYB regularly monitors the compliance of clients. An independent consultant or in house environmental and social specialists carry out monitoring activities at different frequencies, in accordance with the determined E&S risk category of the project. Monitoring activities are recorded in the Environmental and Social Monitoring Report.

TKYB carries out quarterly or semi-annual monitoring and reporting for Category A and B+ projects. The monitoring activities for credits with environmental and social risk Category B- is usually conducted at least once a year within the framework of the Environmental and Social Action Plan. TKYB conducts compliance checks with national legal requirements for credits with C risk categorization. However, regular monitoring is not required for Category C credits. Monitoring activities are recorded in the Environmental and Social Monitoring Report.

The credit contracts oblige credit recipients to fulfil the E&S obligations agreed under the terms of the contract. In case of non-compliance these contract provisions are invoked.

Environmental and Social Training process. Human Resources Department and managers of other relevant departments determine the training needs of the TKYB staff regarding environmental and social issues. The Human Resources System and Strategy Department reviews and updates the training needs at least once a year. All Heads of Departments ensure the participation of employees in the designated trainings. The Environmental and Social Risk Specialist records the completed trainings in the Environmental and Social Training Records document.

Environmental and Social Risk Evaluation Model User Training: All Technical Specialists working in the Sustainability and Social Impact Management Department receive Environmental and Social Risk Evaluation Model user training, the newly hired personnel receive it early at the beginning of employment. The Environmental and Social Risk Evaluation Model user training is provided by qualified personnel on this subject.

Internal audits of the Environmental and Social Risk Evaluation process are integrated into the annual Internal Audit Plan. The internal audit team consists of at least two auditors who have the ability to conduct audits and have the necessary trainings. Internal audits are carried out in accordance with the Internal Audit Procedure within the scope of the Environmental Management System and any non-conformities are identified and reported. Internal Audit findings are recorded in the Internal Audit Report within the scope of Environmental Management System.

In addition, the World Bank provided a hands on three-day training on environmental and social risk management in the credit process to TKYB and PFIs engaged under the existing WB funded projects in 2022 and2023.

Institutional Arrangements. TKYB established the Sustainability and Environmental Social Impact Management Unit in 2021, which is at the moment staffed with a total of eleven staff - 7 environmental and 3 social specialists and a unit head. This team is responsible for the oversight of the environmental and social risk management practices in the credit processes of TKYB, including E&S screening, preparation of the Environmental and Social Risk Assessment reports and E&S monitoring of sub-projects. The Sustainability and Environmental Social Impact Management Unit reports to a dedicated Executive Vice President who reports to the General manager. There is also a Sustainability Committee.

Stakeholder Engagement. TKYB communicates it's Environmental and Social Risk Management policy and its related procedures as well as other relevant environmental and social projects and activities with its staff through different channels of communication including e-mail, intranet pages, social media, etc.

During credit process, employees can communicate opinions and suggestions on environmental and social risk to the Environmental and Social Risk Specialist.

The Environmental and Social Risk Specialist records the opinion/recommendations received using the Environmental and Social Risk Management Opinion/Suggestion Follow-up Form and shares the forms with the Environmental and Social Risk Manager. Environmental and Social Risk Specialist responds to the opinions/recommendations and, if necessary, can take relevant actions in line with the opinions of the Environmental and Social Risk Manager. The Environmental and Social Risk Specialist records the action taken on the Environmental and Social Risk Management Opinion / Recommendation Follow-up Form.

TKYB discloses on its website the risk categorization of the projects which are assessed through the Environmental and Social Risk Evaluation process and approved. For Category A projects, TKYB discloses a brief project description, including a summary of E&S impacts and mitigation measures, on its website after securing authorization from its clients.

For Category A transactions, TKYB requires its clients to disclose Environmental and Social Information (including but not limited to a summary of the environmental and social impacts and mitigation/management measures) regarding their activities financed by the TKYB on their website and at the site/location of the activities financed by TKYB, and to establish a grievance redress mechanism.

Grievance Mechanism. TKYB has online communication and grievance mechanism in place and procedural documents which regulate addressing grievances of all stakeholders as well as its employees. A new procedure titled "Grievance Redress Mechanism for IFI financed projects" was adopted on July 14,2020. This procedure meets the requirements of the *World Bank's ESS10 - Stakeholder Engagement and Information Disclosure* and has been under satisfactorily implementation under two World Bank financed projects. The grievance mechanism is accessible to various stakeholders and it can be used to submit feedback, complaint and/or suggestion by any stakeholder through TKYB corporate website and other channels defined in the mechanism (Figure 1)

The e-mail address surdurulebilirlik@kalkinma.com.tr is used to receive input from stakeholders, public opinions and suggestions on TKYB's environmental and social risk management approach in the credit processes and the environmental and social performance or impacts of the activities financed by TKYB. Opinions and suggestions submitted to this address are transmitted to the Environmental and Social Risk Specialist. Environmental and Social Risk Specialist documents the views/suggestions on the Environmental and Social Risk Management Opinion/Recommendation Follow-up Form, shares with Technical Manager and if necessary, engage with the TKYB's Client to seek further information. They then respond the query in line with the opinion of the Technical Manager and take necessary actions – if needed. The Environmental and Social Risk Specialist records actions taken in the Environmental and Social Risk Management Opinion/Recommendation Follow-up Form**.**

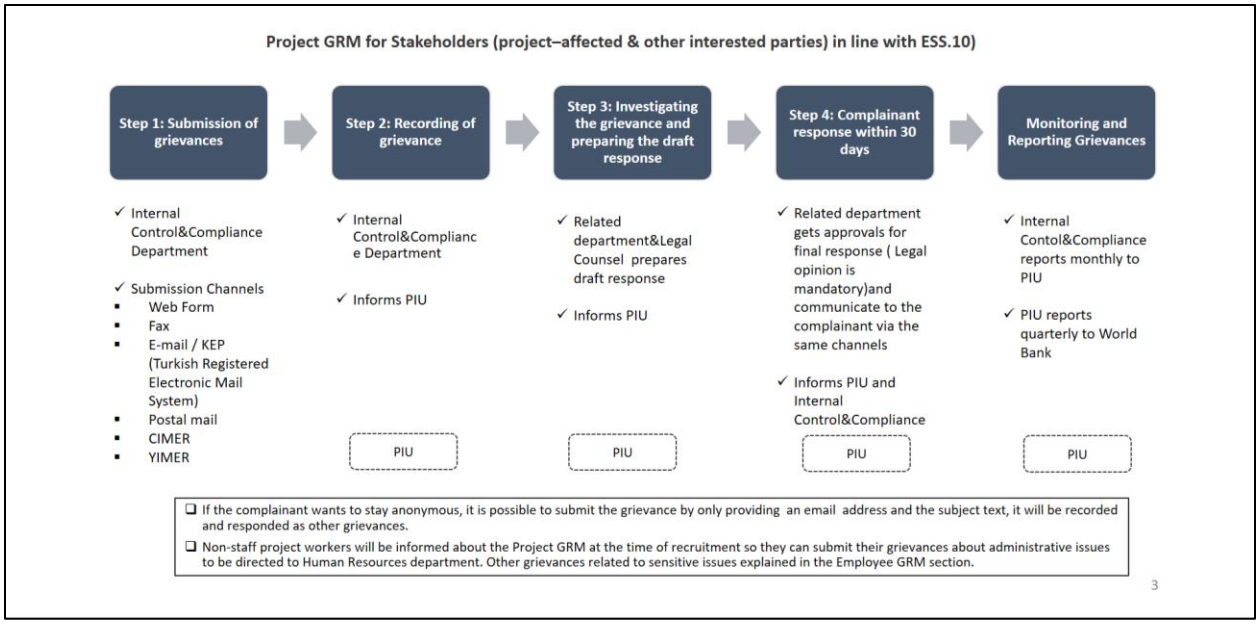

Figure 1. Project Grievance Mechanism for Stakeholders

In 2021, TKYB received 55 external grievances. The grievances and inquiries were related to issues such as status of stocks and loan restructuring requests. The average response time of TKYB to grievances was 7 days. In 2022, 44 grievances were received by external stakeholders and addressed in a timely manner

Grievance Mechanism for Employees. TKYB has an internal employee grievance mechanism and procedure for its employees. On the intranet page of TKYB, employees are able to submit their grievances, which may be related to 1. Ethics, 2. Whistleblowing, 3. Suspicious transactions, 4. Complaints and suggestions. Each grievance is be processed according to internal employee grievance procedure, which can be directed to the Chief Executive Officer (CEO) in case of ethics related grievances; to the Board of Auditors in case of whistle-blowing related grievances; to the Compliance Officer (Head of Internal Control and Compliance department) in case of suspicious transactions related grievances and to human resources department in case of other complaints and suggestions (Figure *2*).

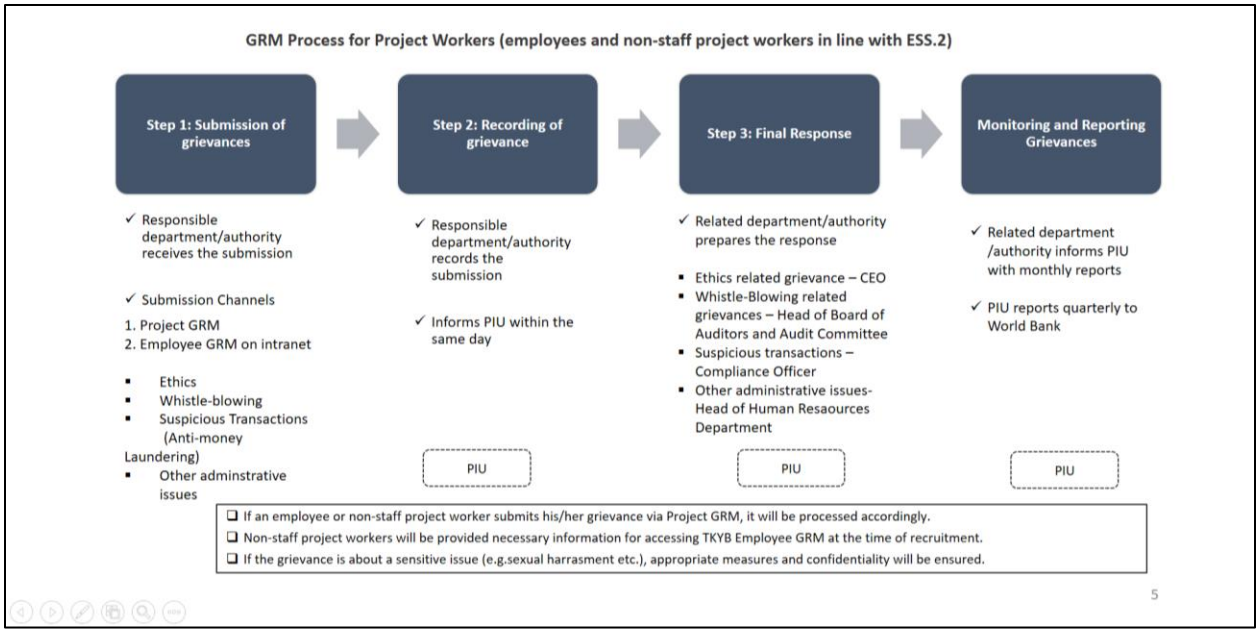

Figure 2. Grievance Mechanism for Workers

Labor and Occupational Health and Safety. TKYB has Quality, Environment, Occupational Health and Safety Policy. OHS policy is in line with Turkish OHS law. TKYB also holds ISO 45001 Certificate. TKYB OHS specialist monitors OHS risks at the workplace on weekly basis and reports to the Representative of the Employer quarterly. There is an incident reporting procedure, risk evaluation procedure, and emergency action plan. TKYB has relevant fire and safety permits required by national law, staff responsible health safety, and an external contractor who assesses and monitor health and safety arrangement every year. TKYB holds regular fire drills, and conducts onboarding and refresher trainings on Occupational Health and Safety for all employees. TKYB's human resources polices meet the requirements of national laws and good international practice. Additionally, TKYB has a functional accident notification procedure for its lending operations, which obliges borrowers to report to TKYB on any accidents, incidents, fatalities, work stoppages. The system is functioning and TKYB reported several OHS incidents under other World Bank-financed projects.

Comparison with relevant core principles

Core Principle #1 under the PforR policy requires that the Program ESMSs are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects. TKYB has an established ESMS that assesses E&S risks; seeks to avoid, minimize or mitigate adverse impacts; and monitors the E&S performance of its investments. Based on the Program's E&S risk level and TKYB's ESMS, the implementation arrangements are consistent with Core Principle #1.

Core Principle #2 under the PforR policy requires that the Program ESMS are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the PforR Program. Based on the Program's E&S risk level and TKYB's ESMS, the implementation arrangements are broadly consistent with Core Principle #2. Areas of further alignment include consideration of the areas not recognized in applicable national and local regulations, and if relevant intangible cultural heritage.

Core Principle #3 under the PforR policy requires that the Program ESMSs are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of

facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards. TKYB has in place an OHS Policy, Sub-Contractor Management Procedures and Accident Reporting Procedures. TKYB includes adherence to national health and safety law and its policies in the loan agreements with borrowers, supervises and monitors OHS performance and incidents, and requires reporting on OHS performance and incidents from the Borrowers. Based on the Program's risk level, the implementation arrangements are consistent with Core Principle #3.

Core Principle #4 requires that the Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards. TKYB has in places risk and impacts screening procedure including screening land impacts, and a requirement for project sponsors to prepare RAPs. Based on the Program's risk level, the implementation arrangements are consistent with Core Principle #4.

4.3.2 Summary and assessment of TSKB ESMS

Institutional Background. TSKB was established in 1950 with the mission of supporting Turkish private sector development. The Bank provides support for Türkiye's sustainable growth with corporate banking, investment banking and consultancy services provided to its clients in a broad portfolio. For project finance, TSKB's loans average around 5 million USD and 37 percent of its portfolio focuses on the renewable energy sector, out of which ten percent is solar. TSKB has been implementing several World Bank financed projects, focusing on renewable energy financing. TSKB has financed 15 percent of the country's total renewable energy capacity. Under these projects, TSKB has established project implementation units including staff responsible for environmental and social issues. The World Bank assessed TSKB's E&S performance as satisfactory under these projects.

TSKB is a stakeholder of several volunteer initiatives such as GRI (Global Reporting Initiative), UNGC (UN Global Compact), UNEP – FI (United Nations Environment Program Finance Initiative), CDP (Carbon Disclosure Project). It is also a supporter of Task Force on Climate-Related Financial Disclosures (TCFD) and aims to fully integrate climate risks into its business processes and to materialize them through targets and performance indicators. In 2021, TSKB published it first Climate Risk Report prepared in line with TCFD recommendations. In 2022, TSKB became a signatory of the Net-Zero Banking Alliance, established by the UNEP-FI. TSKB has committed to align its loan and investment portfolio with zero-emission targets by 2050 and will support its business partners and customers in reducing carbon emissions. TSKB has the best ESG score among Turkish banks.

TSKB employs a total of 388 employees (182 male and 206 female).

Environmental and Social Policies and Systems. Within the last two decades TSKB has covered substantial ground with regards to sustainability. In the 2000s, TSKB started to include environmental and social due diligence as a part of its project appraisal activities to assess its external impacts. TSKB prepared its Environmental Management System (EMS) and put it into practice towards the end of 2006. Holding the SMS (ISO 14001), Occupational Health and Safety (ISO 45001) and Verification of Greenhouse Gas Emissions (ISO 14064-1) certificates, TSKB is Turkey's first carbon-neutral bank.

In the following years, TSKB integrated its sustainability objectives into its project financing and its internal operations. TSKB established its broader Sustainability Policy in 2012 (TSKB Sustainability Policy) and revised its EMS into Sustainability Management Systems (SMS). In 2020, after an internal review of its policies and SMS, TSKB revised these policies into their current ESMS, based on the new World Bank Environmental and Social Standards, its commitment to the Equator Principles, and the increased

relevance of social impact assessment and management in risk management. TSKB classifies its sustainability objectives under four main themes:
1. Sustainability financing
2. Managing Bank's internal and external environmental and social impact
3. Human resources: Training
4. Corporate social responsibility

The highest level of direct responsibility for SMS is the Board Members of TSKB via the Sustainability Committee. The Committee consists of Vice Chairman of the Board, three Board Members, the CEO and two Executive Vice Presidents to manage sustainability activities.

The ESMS consists of the following elements:

1. Environmental and Social Policy (included in Annex 2)
2. Exclusion List (included in Annex 2)
3. Environmental and Social Risk Evaluation Procedures in the credit process including:
   - Environmental and Social Due Diligence and Risk Screening
   - Environmental and Social Risk Categorization
   - Identification and preparation of appropriate site-specific environmental and social assessment (ESA) instruments, such as ESMP, to address site-specific impacts as well as impacts of associated facilities (if any)
   - Requirement for Environmental and Social Action Plan (ESAP) preparation
   - Integration of the ESAP into the credit contract
   - Environmental and social monitoring and annual reporting
   - Roles and responsibilities for ESMS implementation at TSKB
4. Senior Management Commitment
   - The overall responsibility for the ESMS implementation lies with the Sustainability Committee. The Committee consists of three Board Members, the CEO and two Executive Vice Presidents.
5. Environmental and social training process
6. External and internal communication
7. Internal and external control and management review

TSKB has proposed an approach on disposal of damaged and/or End-of-Life Solar Panels to be implemented as part of this Program. This approach is presented in Annex 5.

Risk Assessment and Categorization. For any project financing, TSKB conducts an environmental and social assessment alongside the initial financial and technical assessment and feasibility. As a first step, TSKB assess whether the proposed investment projects comply with environmental and social legislation. TSKB requires the borrower to provide all relevant permits and other kinds of documentation which certify that the borrower complies with the EIA and Environmental Permit and License Regulations prior to loan allocation. TSKB then uses its own Environmental and Social Evaluation Tool (ERET) to review environmental and social risks based on the client and the project characteristics. The ERET functions as an evaluation model that rates the projects and the clients under 47 separate headings in line with the IFC Performance Standards. Based on the ERET assessment, the prospective projects are categorized according to risk level (A for high risk, B+ for medium sensitive risk, B- for medium risk and C for low risk).

Category A: A Project is categorized A if it is likely to have significant adverse environmental and social impacts that are irreversible, cumulative, diverse or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works and may be temporary or permanent in nature.

Category B+: A Project is categorized B+ if it is likely to have significant adverse environmental and social impacts that are mostly temporary, predictable and/or reversible, and the nature of the Project does not preclude the possibility of avoiding or reversing them (although substantial investment and time may be required).

Category B-: A Project is categorized B- if it is likely to have potential adverse risks and impacts on human populations and/or the environment that are not likely to be significant. This is because the Project is not complex and/or large, does not involve activities that have a high potential for harming people or the environment, and is located away from environmentally or socially sensitive areas.

Category C: A Project is categorized C when it is likely to have minimal or no adverse environmental and social impacts.

Based on the risk level, TSKB determines whether additional environmental and social studies and management plans are needed. The risk level also determines the reporting and monitoring frequency and the potential need for the project proponent to hire relevant environmental and social experts, or external monitoring experts.

Table 6. Requirements for a Project Proponent Based on Environmental and Social Risk Categories

ERET Risk Category	Required Actions
A (High)	Project proponent must: - Conduct a detailed Environmental and Social Impact Assessment (ESIA) - Hire an independent consultant to monitor every environmental and social aspects semi-annually or quarterly during the construction period - Hire an independent environmental consultant to monitor every environmental and social aspect in the first operation year TSKB staff conducts: -- Minimum one site visit to monitor environmental and social aspects at each year of investment period -- Minimum one site visit to monitor environmental and social aspects during the operation period
B+ (Medium Sensitive)	Project proponent: -- Must prepare an Environmental and Social Management Plan (ESMP) for the investment -- May need to develop additional impact specific Management Plans depending on impacts -- May need to hire an independent consultant for monitoring during investment and operation periods -- May need to perform additional analysis in pre-construction, construction and operation periods depending on the identified risks of the Project TSKB staff conducts: -- Minimum one site visit to monitor environmental and social aspects at each year of investment period

	-- Minimum one site visit to monitor environmental and social aspects during the operation period
B- (Medium)	Project proponent must: -- Conduct an environmental review to identify potential environmental risks -- Implement necessary environmental control and management measures.
C (Low)	Project proponent must: -- Obtain all environmental permits and licenses required by national law

Once a project is approved for financing, TSKB includes key environmental and social obligations in the loan agreement with the project proponent. All loan agreements have standard clauses referring to national laws and TSKB's environmental and social policies. Loan agreements for medium and high-risk projects also refer to the specific risk management plans.

Monitoring and reporting. TSKB's Engineering and Technical Advisory Department is responsible for the environmental and social assessment of each project to be financed. TSKB engineers make site visits for all the projects in order to observe the project in terms of environmental and social risks. Additionally, engineers assess environmental and social documents and prepare a project evaluation report, including information on the results of the assessment with ERET scores as well as necessary mitigation measures and ESAP.

Engineers conduct site visits during both credit evaluation and monitoring phases of the projects. TSKB has set the principles for the monitoring E&S impacts and performance of its financed projects. Sub-borrowers for Category A projects should hire an independent consultant to carry out site visits and assess the implementation status of the action plans that are agreed upon in the loan approval and/or disbursement phase. For Category B+ projects, monitoring activities are conducted by TSKB engineers and/or external consultants annually or bi-annually.

TSKB engineers conduct monitoring vis-à-vis sub-borrowers Environmental and Social Action Plans and Environmental and Social Management Plans. A questionnaire, on the project's potential environmental and social impacts and expected mitigation measures, is shared with the sub-borrower before the site visit. After collecting responses, the engineer visits project sites to observe implemented practices. The Engineer takes into consideration the Environmental and Social Management Plan and IFC Performance Standards during the monitoring process. The process ends with a preparation of a monitoring report about the visit.

The monitoring period covers the construction period and (at least) the first year of operation period of the investment for both Category A and B + projects.

Institutional Arrangements. At the highest level, a Sustainability Committee (including Vice Chairman of the Board, 3 board members, the CEO and 2 executive vice presidents) oversees the SMS. Under this level, there are 17 staff working in sub-committees focusing on different areas, such as sustainability reporting, carbon reporting, climate, social impact assessment and gender equality. The sub-committees are responsible for developing strategies and policies, monitoring and reporting on performance, leading communication efforts, leading external and internal training programs, and managing internal and external environmental and social impacts. There is annual reporting to inform senior management about the SMS.

The Engineering Department leads the day to day environmental and social risk assessment and management for project financing. The department currently employs 12 engineers including six environmental and one social specialists. Two of these engineers have OHS background and expertise.

TSKB engineers regularly attend trainings on environmental and social risk management delivered by IFIs. All employees receive training about the ESMS during onboarding. The environmental and social staff conduct annual trainings on ERET for other departments, such as the Project Finance and Corporate Banking Sales Departments or the Engineering Departments, to refresh all engineers' knowledge on the ERET and raise awareness about environmental and social impacts of investments.

Stakeholder Engagement. TSKB has publicly disclosed on its website its broader Sustainability Policy, as well as the other policies and procedures that make up its ESMS. TSKB also discloses on its website the risk categorization of the projects which are assessed through its ESMS and approved. For high-risk projects, TSKB discloses the key environmental and social risks assessment and management documents on its website.

On an annual basis, TSKB publishes and discloses a Sustainability Report, covering an assessment on its environmental and social performance and compliance based on the principles in its Sustainability Policy (which can be accessed at https://www.tskb.com.tr/en/sustainable-banking/tskb-and-sustainable-banking/our-sustainability-reports).

Grievance mechanism. TSKB has a grievance mechanism and procedures in place to receive complaints from both internal and external stakeholders via their website, phone call or e-mail (these can be reached at https://www.tskb.com.tr/en/about-us/tskb-contact-form and https://www.tskb.com.tr/en/contact). This procedures meet the requirements of the World Bank's ESS10 - Stakeholder Engagement and Information Disclosure, and has been under satisfactorily implementation under World Bank financed projects. The grievance mechanism is accessible to various stakeholders, and it can be used to submit feedback, complaint and/or suggestion by all stakeholders.

For complaints submitted in writing, a "Confirmation Letter" is issued with the date of receipt of the complaint and the signature of the relevant unit head. After complaints are received, a "Complaints Statement" is issued to record the subject within the grievance system. After assessment and investigation of the complaint, an Evaluation and Conclusion Statement is communicated to the submitter of the complaint within 30 days after the application.

Labor & Occupational Health and Safety. TSKB has an Occupational Health and Safety Policy and requires its borrowers to comply with national legislation as well as its own policy. According to the project risk classification, TSKB requires its borrowers to conduct OHS risk assessments, develop OHS plans and/or develop OHS policies. TSKB also has in place Sub-Contractor Management Procedures and Accident Reporting Procedures. TSKB regularly evaluates OHS risks in its portfolio and keeps records of all incidents, accidents and lost time injury (LTI) days.

For its own buildings and employees, TSKB has relevant permits fire and safety permits required by national law, an Emergency and Contingency Plan, staff responsible health safety, and an external contractor who assesses and monitor health and safety arrangement every year. TSKB holds regular fire drills and conducts onboarding and refresher trainings on Occupational Health and Safety for all employees.

TSKB has a publicly disclosed human resources policy and an internal employee grievance mechanism. Each grievance is processed according to internal employee grievance procedures.

Comparison with core principles.

Core Principle #1 under the PforR policy requires that the Program ESMSs are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects. TSKB has an established ESMS that assesses E&S risks; seeks to avoid, minimize or mitigate adverse impacts; and monitors the E&S performance of its investments. The Program covers moderate risks investments for installation of solar PVs and BESS. Based on the risk level and TSKB's ESMS, the implementation arrangements are consistent with Core Principle #1.

Core Principle #2 under the PforR policy requires that the Program ESMS are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the PforR Program. Based on the Program's E&S risk level and TSKB's ESMS, the implementation arrangements are consistent with Core Principle #2. Areas of further alignment include consideration of the areas not recognized in applicable national and local regulations, and if relevant intangible cultural heritage. Core Principle #3 under the PforR policy requires that the Program ESMSs are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards. TSKB has in place an OHS Policy, Sub-Contractor Management Procedures and Accident Reporting Procedures. TSKB includes adherence to national health and safety law and its policies in the loan agreements with borrowers, supervises and monitors OHS performance and incidents, and requires reporting on OHS performance and incidents from the Borrowers. Based on the moderate risk investments under the Program, the implementation arrangements are consistent with Core Principle #3.

Core Principle #4 requires that the Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards. TSKB has in places risk and impacts screening procedure including screening land impacts, and a requirement for project sponsors to prepare RAPs. Based on the Program's risk level, the implementation arrangements are consistent with Core Principle #34

4.3.3. Borrowers (TKYB and TSKB) Approach to Solar Panel Recycling

During the implementation of the Program, the Borrowers will aim to encourage the subproject owners to minimize the environmental impacts of waste produced by the end of life solar panels through developing best practice recycling scenarios for disposal of such solar panels. This would contribute to better environment with less hazardous waste generated, and would also contribute to promoting circular economy approach in the energy sector for Türkiye.

Since the required technical and legal infrastructure for recycling of solar panels has not been yet developed to make such attempts financially viable, encouragement by the Borrowers would be critical for the implementation of the recycling best practices by the subproject owners.

In that respect, the Borrowers will engage with the subproject owners and the solar panel manufacturers and/or bulk suppliers to increase awareness of the parties on good practices on recycling and recovery of solar panels and components including the implementation of cradle to cradle framework, take-back policy by manufacturer and other end-of-life management options that are available and that will be globally developed during the program life span.

The Borrowers will facilitate the dialogue among the sub project owners and the policy makers at relevant platforms to emphasize the importance of national legislation as a means for the implementation of good recycling practices for the end of life solar panels. Borrowers will consult with the policy makers and other interested groups on the development of the national waste legislation to include the end-of-life management options for solar panels with minimal environmental impacts.

4.3.4. Summary of FIs ESMS gaps

TSKB. TSKB established an EMS in 2006 and transformed this into its current SMS in 2014. In 2020, after an internal review of its SMS and ERET, TSKB revised some of its policies and risk management tool based on the new World Bank Environmental and Social Standards, and the internal review's conclusion on the increased relevance of social impact assessment and management in risk management overall. In recent years, TSKB has increased staffing to support SMS implementation, including hiring one social specialist. While there are no significant gaps identified in the ESMS policies and procedures, to strengthen the ESMS implementation in the area of land impacts and grievance management, TSKB can increase the number of qualified social staff in the long run.

TKYB. TKYB adopted the ESMS in 2020 which meets the *World Bank Environmental and Social Standards 9: Financial Intermediaries* requirements. TKYB also established a dedicated Sustainability and Environmental and Social Impact department, and in recent years has increased staffing to support the ESMS implementation, including hiring three social specialists. The assessment did not identify significant ESMS gaps.

4.4. Institutional Arrangements and Overview of Other Relevant Agencies

The Ministry of Energy and Natural Resources (MENR) will be responsible for improving the policy frameworks for solar PVs and battery storage. Such policy and frameworks will likely focus on the harmonization of technical standards for grid RSPV, net metering to allow for different injection and consumption points and promoting battery energy storage systems in Türkiye. Since Core Principle #1 underlines the Program's need to promote E&S sustainability and informed decision-making relating to a Program's E&S effects, this section focuses on MNRA's consideration of environmental and social impacts in the preparing of regulations.

MENR follows the national legislation and its mandatory requirements and procedures (i.e. EIA Regulation) with regards to environmental and social assessments to be carried out for the projects; and does not have any additional in-house E&S assessment strategies.

MENR currently has a webpage with a specific section on "Information Request" which jointly works with CIMER. CIMER allows people to ask for information, ask for requests, make suggestions, and convey their complaints and/or compliments. However, the MENR platform allows only for information requests and does not cover other types of inquiries and grievances. The MENR does not have a grievance procedure that provides guidance to the applicants about the steps to follow for submitting their grievances/feedbacks about Ministry's activities, and it does not provide for the procedure to resolve the requests submitted for Ministry's attention.

MENR is responsible for the formulation of national energy policies and the supervision of their implementation. Establishment purpose of the Ministry in accordance with the Law on Organization and

Roles of the Ministry of Energy and Natural Resources No. 3154 is help determine improvement and strengthening of objectives and policies, security and welfare and national economy in reference to energy and natural resource and to enable energy and natural resources to be investigated, developed, generated and consumed in duly manner. The Ministry's Strategic Plan has been aimed to be implemented under the consideration of environmental, economic and sustainability principles in terms of its all goals, objectives and strategies. Main aim of the Ministry's energy policies is to meet the energy needs of increasing population and growing economy in a continuous, qualified and secure manner through primarily private sector investments in a competitive and transparent free market environment. MENR is also a party to National Climate Change Strategy, National Climate Change Action Plan and Strategy on Energy Efficiency; where a wide variety of greenhouse gas emissions reduction policies and measures are available: energy efficiency and conservation measures, increasing the shares of new and renewable energy sources in the energy supply base, switching from high-to low-carbon fuels (e.g. from coal to gas), adoption of emissions reduction systems, limiting the use of energy and preventing losses from energy distribution systems. The Renewable Energy Law was introduced in 2005, an Energy Efficiency Law was enacted in 2007. The National Energy and Mining Policy, which MENR initiated, aims to reduce the dependence on external energy in favor of renewable sources. Ministerial responsibilities are clearly delineated in terms of policy formulation and enforcement. The institutional roles for data collection and information dissemination are in place. A number of incentive schemes and technical assistance (TA) programs have been developed and are operational. MENR was also a beneficiary in several energy sector programs carried out for EU pre-accession.

The Energy Market Regulatory Authority (EMRA) was established in 2001 to regulate the electricity, natural gas and petroleum markets in Türkiye. It is responsible for the preparation of secondary legislation for energy markets, setting out the pricing principles for regulated tariffs and approving, drafting, amending, enforcing and auditing performance for distribution and customer services.

EMRA will be responsible for improving the policy and regulatory frameworks for solar PVs and battery storage. Such policy and regulatory frameworks will likely focus on the harmonization of technical standards for grid RSPV, net metering to allow for different injection and consumption points and promoting battery energy storage systems in Türkiye. Since Core Principle #1 underlines the Program's need to promote E&S sustainability and informed decision-making relating to a Program's E&S effects, this section focuses on EMRA's consideration of environmental and social impacts in the preparing of regulations.

EMRA follows the national legislation and its mandatory requirements and procedures (i.e. EIA Regulation) with regards to environmental and social assessments to be carried out for the projects; and does not have any additional in-house E&S assessment strategies. Although EMRA follows the national legislation, for all licensed renewable energy projects, regardless of the EIA requirements, EMRA discloses the project-relevant information on their official webpage for 10 days and seeks written comments from the public.

EMRA actively disseminates information on existing energy regulations that directly affect consumers. Through its website, press releases and information booklets, EMRA provides consumers with information on legislation, market and consumer rights, frequently asked questions for different energy sectors, national tariffs, ways to understand and estimate electricity bills, communication information for electricity distribution companies etc.

EMRA has a Consumer Complaint Mechanism in place and this mechanism is considered as "advanced" in terms of compliance with the European Union acquis[9]. The existing system has been analyzed within the scope of the European Union assessment titled "Improvement of performance-based tariff regulation of EMRA for Turkish energy markets through introducing an enhanced monitoring system Project"[10, 11].

Although EMRA's complaint/feedback form is available at EMRA's official webpage[12], EMRA advises its customers to first reach out their distribution companies (DCs). The DCs are obliged to respond to the complaints in 15 days. However, EMRA also receives, assesses and resolves the complaints submitted via CİMER or its own customers complaints page. The complaint is first categorized under pre-defined categories (electricity, gas, LPG etc.) and then respective EMRA specialists respond to the customers and inform the DC via an official letter describing the complaint received and requesting the DC's statement on the issue. EMRA also informs the consumer regarding their complaint after receiving a statement and/or a clarification from the DC.

The Ministry of Labor and Social Security (MoLSS) has a key mandate to ensure the overall implementation of labor and occupational health and safety laws in the country. The Labor Inspection Board under the Ministry of Labor and Social Security has a mandate to enforce labor and occupational, health and safety (OHS) laws and to monitor working life to ensure protection of workers' health and protect them from hazards in the workplace. The Labor Inspection conducts regular OHS and labor audits, including unannounced audits.

The Labor Inspection is organized into five territorial groups: Adana, Ankara, Bursa, İstanbul and İzmir. Ankara is the largest group in terms of both the number of provinces served and the total number of annual inspections. The Ankara Group serves 47 out of 81 provinces, whereas the Adana Group serves 15 provinces, İzmir Group serves 9 provinces, Bursa group serves 6 provinces and İstanbul Group serves 4 provinces.[13]

The Labor Inspection performs inspections regarding both occupational health and safety, and also labor issues such as employment status and working conditions like working hours, wages, unionization, illegal employment, and child and young labor. Labor inspectors visit workplaces based on an annual plan or as occasional/unannounced visits. After the workplace audits, the labor inspectors prepare reports about the compliance with national laws including health and safety conditions in the workplace, working status of employees, any problems identified, and recommendations on corrective measures for employers to implement. The labor inspectors can also issue fines for non-compliances, as prescribed by national laws.

Ministry of Environment, Urbanization and Climate Change (MoEUCC) is the main authority for the environmental and urbanization management. The organization, duties, and powers of the MoEUCC were reorganized with the Presidential Decree No. 1 on the Presidential Organization published on 10.07.2018 following the transition to the Presidential Government System. The MoEUCC has three (3) general directorates which are responsible for environmental affairs, namely General Directorate of Environmental Management, General Directorate of Environmental Impact Assessment, Permit and Inspection, General Directorate of Protection of Natural Assets.

[9] https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/3894261/25824B882CF017E0E053C92FA8C0EE59.PDF
[10] https://ab.gov.tr/improvement-of-performance-based-tariff-regulation-of-emra-for-turkish-energy-markets-through-introducing-an-enhanced-mo_52160_en.html
[11] http://energytariff.org/wp-content/uploads/2020/11/Task-7.1-Report.pdf
[12] https://tuketici.epdk.gov.tr/epdk.be/Default.aspx
[13] https://www.ilo.org/wcmsp5/groups/public/---europe/---ro-geneva/---iloankara/documents/publication/wcms_498829.pdf

The summary of main responsibilities of the General Directorate of Environmental Management are (i) to prepare legislation on prevention and control of environmental pollution, to develop standards, to determine measurement, detection and quality criteria; to give an opinion in terms of environmental pollution according to the characteristics of the receiving environment, (ii) To work on the determination of targets and principles for the protection of air quality, reduction or elimination of air pollution, noise and vibration; (iii) encourage the use of clean energy, especially renewable energy sources, (iv) determine the criteria for waste and chemicals that have negative effects on the environment, air pollution, noise and vibration throughout the country, (v) to realize an effective environmental management, to determine the necessary economic tools and to develop standards in order to ensure the compatibility of waste and chemicals with the environment, (vi) to protect the ground and surface waters, seas and soil, to prevent or eliminate pollution and to eliminate pollution and (vii) to determine the targets, policies and criteria for the management of waste and chemicals, (viii) to minimize, classify, collect, transport, temporarily store, recycle waste at source disposal, reuse, (ix) determining the principles regarding the transportation of waste and hazardous waste transportation licenses, ensuring and monitoring their implementation, determining the current pollution status of waste and chemically contaminated areas, (x) global To coordinate with other institutions and organizations in order to determine the plans, policies and strategies for taking measures regarding climate change and ozone depletion, (xi) to take preventive measures for applications that cause visual pollution in buildings and other structures in built-up areas,

General Directorate of Environmental Impact Assessment, Permit and Inspection is mainly responsible for (i) to carry out environmental impact assessment and strategic environmental assessment studies and to make, monitor and supervise the necessary decisions in this regard, (ii) to monitor all kinds of activities and facilities to prevent environmental pollution and to improve environmental quality, to take and have necessary measures and to inspect, to give permission and license, (iii) to monitor and inspect the emissions, discharges and wastes, and treatment and disposal systems of activities and facilities that cause environmental pollution, (iv) to monitor the activities related to waste and chemicals, air pollution, noise, vibration and non-ionizing radiation that have negative effects on the environment throughout the country, to determine and control all kinds of activities that have negative effects on underground and surface waters, seas and soil, stop activities in dangerous situations or when necessary, (v) to determine, implement and ensure the implementation of measurement and analysis criteria regarding environmental pollution, (vi) to license, monitor and supervise all kinds of waste disposal facilities, (vii) to monitor and supervise activities within its scope of duty, to monitor international studies and to ensure their implementation at national level,

The main responsibilities of the General Directorate of Protection of Natural Assets are (i) to determine the procedures and principles for the registration, approval and announcement of national parks, nature parks, natural monuments, nature protection areas, wetlands and other areas with similar protection status, and to register the boundaries of these areas, (ii) to determine the procedures and principles regarding the determination, registration, approval, amendment and announcement of natural assets and natural protected areas and special environmental protection zones and to determine the boundaries of these areas, to register, manage and manage them.

Turkish environmental legislation is mainly comprised of national laws, regulations, statutes and decisions. Briefly, environmental legislation regulates the following areas: waste management, water quality, air quality, treatment of natural resources, chemicals, industrial noise, etc.

5. Assessment of Institutional Capacity and Performance

5.1. Adequacy of Environmental and Social Management Systems

Türkiye has a relatively well-developed policy and legal framework on environmental assessment, waste management, land and labor and OHS issues. Recently amended EIA aligned with the EU regulation and international good practice guidance. The EIA Regulation requires screening, scoping, avoiding, minimizing, and mitigating adverse E&S impacts of the proposed activities as well as compensating for the residual impacts. Recent amendments also include social aspects such as requirements for social assessment and SEP preparation. Labor and OHS regulations are aligned with ILO conventions. The Constitution prohibits the forced labor, which is also treated as a criminal act under the law.

While the laws on land expropriations and voluntary market based transactions are comprehensive and adequate, the main gap related to the eligibility of informal land users for any type of assistance. National laws do not provide for express requirement for livelihood restoration of affected persons.

While waste management regulation is detailed, it does not expressly require the recycling of the solar panels and BESS. GT approved in 2022 Regulations on the Management of Waste from Electric and Electronic Equipment, providing for separation, collection, and organized storage of e-waste with the purpose of turning entities processing such waste into producers for recovery and recycling. The regulation does not include specifically solar panels and BESS**.** Solid waste management and recycling infrastructure, including facilities for the disposal of waste have room for improvement especially for the disposal of not-in-use solar panels and BESS.

TSKB and TKYB have comprehensive ESMSs, which also rely on the standards of international finance institutions. Their ESMSs address some of the gaps with national laws identified above. Both TSKB and TKYB have established ESMS that assess E&S risks; seek to avoid, minimize or mitigate adverse impacts; and monitor the E&S performance of its investments. Both TSKB and TKYB have OHS Policies, and accident reporting procedures in place. TSKB and TKYB also have risk and impacts screening procedure including screening land impacts, and a requirement for project sponsors to prepare RAPs in line with international standards. TSKB and TKYB also agreed to pilot/adopt new management approaches for the recycling of solar panels during the implementation of the Program.

Both MENR and EMRA follow the national legislation and its mandatory requirements and procedures (i.e. EIA Regulation) with regards to environmental and social assessments to be carried out for the projects. However, MENR would benefit from establishing an external communication and grievance mechanism accessible to people affected by the investments in the energy and natural resources sectors. Such mechanism would help stakeholders to express their views on MENR interventions in the sector.

5.2. Adequacy of Environmental and Social Management Capacity

TSKB and TKYB have adequate capacity and systems to manage environmental and social impacts of activities financed under the Program. Both institutions have well established ESMSs, aligned with the requirements of IFIs, and have experience with investing in the renewables sector including solar energy. Both TSKB and TKYB have dedicated environmental and social impact management units, whose staffing levels have been increased in the past two years. These units have been traditionally mainly staffed with

environmental engineers (with some of them having OHS certification as well). However, TSKB and TKYB hired social specialists only in the last year. To strengthen the ESMS implementation in the area of land impacts and grievance management, TSKB could increase the number of qualified social staff.

Under the Results Area 2, TSKB and TKYB will be on-lending to other PFIs, specialized in reaching underserved market segments. These PFIs are not known at this stage. The Program Action Plan will include a requirement for TKYB and TSKB to review the capacity of these PFIs to manage environmental and social risks and impacts associated with the Program. The POM will include eligibility criteria and only PFIs with satisfactory ESMS and capacity to manage E&S impacts will be eligible to participate in the Program.

The Labor Inspection Board under the MoLSS conducts regular OHS and labor audits, including unannounced audits. The labor inspectors issue fines for non-compliances, as prescribed by national laws. Their reports could serve as another 'random' check on the activities of subproject owners if such facilities are visited during the life of the Program.

6. ESSA Program Action Plan

Although the overall environmental and social effects of the Program are expected to be positive, there could also be residual risk associated with waste management and recycling issues. The Program provides an opportunity to strengthen the procedures on recycling and waste management.

These measures will be implemented through the following actions presented in Table 7.

Table 7. ESSA Action Plan

No	Action	Responsible Party	Timeline	Verification
1	Appoint and maintain competent specialists for the Program including: one environmental, one social and one OHS specialists to support Program implementation.	TSKB and TKYB	No later than 30 days after the Effective Date and maintain staffing during Program implementation.	TSKB and TKYB submit to IBRD the qualifications and experience of appointed specialists and maintain required E&S staffing during Program implementation.
2	Submit E&S eligibility report for each candidate facility borrowers (FBs) for lending under the Results Area 2 to IBRD.	TSKB and TKYB	Before signing facility sub-loan agreement with facility borrowers.	TSKB and TKYB submit E&S eligibility reports for facility borrowers to IBRD describing E&S procedures and E&S capacity of FBs.
3	Support the development and implementation of Solar Panel Recycling approach as described in Program ESSA.	TKYB and TSKB	Throughout the Program implementation.	TSKB and TKYB developed and implemented Solar Panel Recycling approach.

ANNEX 1. TKYB ENVIRONMENTAL AND SOCIAL POLICY (2020)

1. Development and Investment Bank of Türkiye has the mission to meet the financing and consultancy needs of investors in line with the sustainable development priorities of Türkiye, to contribute to the dissemination of capital to the base and to the structural transformation, to cooperate with domestic and foreign organizations. In line with this mission, the Bank considers environmental and social sustainability as a fundamental component of sustainable and inclusive development. The Bank is aware of the need to address three aspects of sustainable development - economic, social and environmental - in a balanced and integrated manner. Through this Environmental and Social Policy, the Bank aims to manage its direct and indirect environmental and social impacts that may occur as a result of its operational activities and financial services respectively. This policy covers all employees and activities of the Bank.
2. The Bank recognizes the importance of environmental and social development and the long-term benefits that it will provide in Türkiye. In order to manage the impacts arising from its activities the Bank, in addition to combating climate change, adopts resource optimization, increasing positive environmental and social activities and minimizing negative environmental and social impacts. The Bank is committed to fulfil its legal obligations, to support environmental and social awareness, to be sustainability oriented, to continuously improve its performance and to transfer its knowledge to its stakeholders.
3. With this perspective, the Bank aims to manage its direct impacts in a sensitive manner to the environment and society. Greenhouse gas emissions caused by the Bank's operational activities are regularly monitored and targets are set for mitigation. The Bank commits to take measures to reduce resource consumption (energy, water, paper) and waste minimization. The Bank considers its human sources as a core value and aims to provide work-life balance, safe and healthy working environment for its workers in recruiting and managing and to provide equal opportunities in selecting its clients and suppliers.
4. In the investments financed, the Bank is committed to conserving biodiversity and cultural heritage, to avoid adverse impacts upon the living conditions of communities and vulnerable groups or individuals and to promote equality of opportunity and avoidance of discrimination. Investments that are likely to have unacceptable effects on environment and society are not willingly supported or financed. The Bank does not knowingly finance the activities that are prohibited in accordance with the national legislation or international conventions to which Türkiye is a party, that are comprised in the Exclusion List attached to this Policy, or that are not in compliance with the environmental and social standards and requirements of its Lenders. Therefore, the Bank finances business opportunities which are in accordance with applicable national regulations and relevant international standards or present a plan to do so within a reasonable time period.
5. The Bank believes that environmental and social risk assessment should be a part of routine decision- making processes in all investment and credit applications. Therefore, the Bank has developed an Environmental and Social Management System (ESMS) and is implementing it through the entire lifetime of the loans to safeguard the Bank from credit, reputational and environmental and social liability risks. The Bank evaluates all lending activities in compliance with national environmental and social laws and regulations, the Bank’s own policy and procedures and where applicable all other environmental and social standards to which the Bank is committed to meet. The ESMS enables the Bank to consistently categorize the potential

environmental and social risks of its clients and credit activity and appraise the associated environmental and social impacts. According to the defined environmental and social risk category, the Bank develops action plans to mitigate the risks and impacts and monitors the performance throughout the term of the credit. Site visits may be conducted during the appraisal of a credit to ensure an effective understanding of environmental and social risks and impacts, and to support the preparation of a management plan specific to the site where appropriate. Clients are supported to build capacity and effectively increase their environmental and social performance. The Bank also requires regular reporting and conducts environmental and social monitoring on all investments it finances.

6. The Bank is committed to developing and maintaining the necessary internal capacity, structure, guidance resources and engagement with third-parties for effective implementation of the ESMS across the organization; not amend, waive or materially restrict the scope or effect of the applicability of ESMS, and to conduct appropriate E&S due-diligence of potential co-financing joint venture and partners; and ensure the scope of its ESMS is not compromised in such partnerships. Training needs are identified, and employees are provided with necessary trainings to increase their capacity. Voluntary activities are supported to provide public awareness on climate change in collaboration with non-governmental organizations and other stakeholders.
7. The direct and indirect environmental and social performance of the activities of the Bank is reviewed annually with the aim of continuous improvement. Where commercially and legally feasible, the financings approved in conformity with the ESMS are regularly shared with all stakeholders on the website of the Bank according to the risk categories. Any party that is directly and/or significantly affected by the Bank's operations and financing activities may submit grievances to the Bank through its website at http://kalkinma.com.tr/ or by emailing to: surdurulebilirlik@kalkinma.com.tr. All received grievances are documented systematically, responded in a timely manner and reported to the upper management periodically. The Bank also may require from its Clients the disclosure of relevant E&S information and the establishment of a grievance redress mechanism associated with the activities it finances.
8. The Sustainability Committee is responsible for the follow up and update of this policy, and the Board of Directors is responsible for its approval and annulation. The policy will be updated when necessary immediately upon changes in legislation and emergence of violations or requirement for improvements. All updates to this policy will be shared with the public via the Bank's website. This policy entered into force on January 17th, 2020 upon approval of the Board of Directors.

EXCLUSION LIST

The Bank will not knowingly finance projects/activities involving the following:

1. Forced labor (1) or harmful or exploitative forms of child labor (2).
2. The production of, or trade in, any product or activity deemed illegal under national laws or regulations of the country in which the Project is located, or international conventions and agreements, or subject to international phase out or bans, such as:
    a. Production of, or trade in, products containing polychlorinated biphenyl (PCBs) (3).
    b. Production of, or trade in, pharmaceuticals, pesticides/herbicides and other hazardous substances subject to international phase-outs or bans (Rotterdam Convention, Stockholm Convention) (4).

c. Production of, or trade in, ozone depleting substances subject to international phase out (Montreal Protocol) (5).

3. Trade in wildlife or production of, or trade in, wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (6).
4. Trans-boundary movements of waste prohibited under international law (Basel Convention).
5. Production of, or trade in, weapons and munitions, including paramilitary materials.
6. Production of, or trade in, alcoholic beverages, excluding beer and wine.
7. Production of, or trade in, tobacco.
8. Gambling, casinos and equivalent enterprises.
9. Production of, trade in, or use of unbounded asbestos fibres (7).
10. Activities prohibited by legislation of the country in which the Project is located or by international conventions relating to the protection of biodiversity resources or cultural resources, such as, Bonn Convention, Ramsar Convention, World Heritage Convention and Convention on Biological Diversity.
11. Commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests.
12. Production or trade in wood or other forestry products other than from sustainably managed forests.
13. Marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats.
14. Shipment of oil or other hazardous substances in tankers that do not comply with IMO requirements (IMO, MARPOL, SOLAS and Paris MOU) (8)

FOOTNOTES:

1. Forced labor means any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty (including any kind of forced or compulsory labor, such as indentured labor, bonded labor or similar labor- contracting arrangements, or labor by trafficked persons)
2. For purposes of this List, harmful or exploitative forms of child labor means the employment of children under the age of 18 for work which by its nature or the circumstances in which it is carried out is likely to jeopardize their health, safety or morals; but if the laws or regulations of the country in which the Project is located provide, in conformity with the International Labour Organization's Minimum Age Convention, 1973, that children at least 16 years of age may be employed for such work on condition that their health, safety and morals are fully protected and that they have received adequate specific instruction or vocational training in the relevant branch of activity, then child labor means employment of children for work that does not comply with these laws and regulations
3. PCBs: Polychlorinated biphenyls are a group of highly toxic chemicals. PCBs are likely to be found in oil-filled electrical transformers, capacitors and switchgear dating from 1950 to 1985.
4. United Nations Consolidated List of Products whose Consumption and/or Sale have been Banned, Withdrawn, Severely Restricted or not Approved by Governments; Convention on the Prior Informed Consent Procedures for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention); Stockholm Convention on Persistent Organic Pollutants; World Health Organization Recommended Classification of Pesticides by Hazard. A list of pharmaceutical products

subject to phase outs or bans is available at http://www.who.int. A list of pesticides, herbicides and other hazardous substances subject to phase outs or bans is available at http://www.pic.int.

5. Ozone Depleting Substances (ODSs): Chemical compounds which react with and deplete stratospheric ozone, resulting in the widely publicized "ozone holes." The Montreal Protocol on Substances that Deplete the Ozone Layer lists ODSs and their target reduction and phase out dates. A list of the chemical compounds regulated by the Montreal Protocol, which includes aerosols, refrigerants, foam blowing agents, solvents and fire protection agents, together with details of signatory countries and phase out target dates, is available from the United Nations Environment Programme, http://www.unep.org/ozone/montreal.shtml
6. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). A list of CITES listed species is available from the CITES secretariat, http://www.cites.org.
7. This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20 percent.
8. Non-compliance with International Maritime Organization (IMO) requirements: tankers that do not have all required International Convention for the Prevention of Pollution from Ships(MARPOL), International Convention for the Safety of Life at Sea (SOLAS) certificates (including, without limitation, International Safety Management Code compliance), tankers banned by the Paris Memorandum of Understanding on Port State Control (Paris MOU), and tankers due for phase out under MARPOL regulation 13G. No single hull tanker over 25 years old should be used. http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-for-thePrevention-of- Pollutionfrom-Ships-%28MARPOL%29.aspx

ANNEX 2. TSKB ENVIRONMENTAL AND SOCIAL POLICY (2020)

A. OBJECTIVE

The objective of this policy is to set forth fundamental principles pertaining to the assessment and management of the environmental and social impact that may result from the activities of Türkiye Sınai Kalkınma Bankası AŞ (TSKB).

B. SCOPE

This policy applies to all the personnel and activities of TSKB's headquarters and branch units.

C. PRINCIPLES AND PRACTICES

1. Track shall be kept of all national laws and regulations pertaining to environmental and social issues and efforts shall be made to comply with them.
2. Sustainability principles shall be integrated into all business processes; in-house awareness shall be raised so as to ensure employee engagement.
3. During project-assessment and financing stages:
   - In the conduct of environmental and social impact studies, internationally-accepted environmental and social assessment standards and approaches shall be taken into account along with national rules and regulations.
   - The occupational health & safety risks potentially inherent in investment projects that are being financed shall be reduced and customers' compliance with laws and regulations shall be supported.
   - The potential environmental and social impact of investment projects shall be assessed within both national and international frameworks and all projects shall be tested against to the "TSKB Environmental and Social Risk Assessment System Model" irrespective of the dimensions of the investment. Investor firms shall be required to take measures to prevent or reduce such effects and, when necessary, to formulate environmental and social action plans in line with specific risk categories. Firms shall be regularly monitored on these matters so as to determine whether or not measures are being taken as necessary.
   - TSKB is committed, without subjecting projects to any environmental and social impact study and irrespective of the size of the loan, not to provide financing for any activity that is prohibited and/or restricted by Turkish laws and regulations or by any international agreement to which Türkiye is a party; neither shall it do so for any activity that is included in the "List of activities that are not to be financed" (see Appendix) which has been formulated taking into account the bank's working principles and which has been approved by the TSKB Board of Directors.
4. Through national and international initiatives which are related to the Bank's areas of activity and which support sustainability, TSKB collaborates and exchanges practical knowledge with various stakeholders including, but not limited to, non-governmental organizations, universities, and public agencies.
5. TSKB takes part in and gives its backing to social responsibility projects that support sustainability and social development in such areas as education, environmental issues, and culture & art.
6. Measures shall be taken to prevent and/or reduce any adverse impact (be it concerned with carbon emissions, or with energy, water, or paper use, or with waste, or with transport, or otherwise) arising on account of the Bank's operations; projects shall be undertaken and training shall be provided to

improve performance on such issues. Any and all manner of projects to improve resource and energy efficiency at the Bank shall be supported.

7. TSKB's environmental and social impact is monitored in accordance with the ISO 14001 and the ISO 14064 standards and with such other new standards as may be published. Engaging in carbon-neutral banking; the TSKB Sustainability Management System is reviewed annually and the results are submitted to the TSKB Sustainability Committee; information about such matters is disclosed to all stakeholders through sustainability reports that are published at regular intervals.
8. Greenhouse gas emissions that are the fundamental cause of climate change are quantified and targets are set for the measures that are to be taken to reduce them. Carbon emission-related ISO standards shall be complied with systematically and the results shall be made accessible to all stakeholders.
9. Bank customers and other stakeholders as may be concerned are provided with information about climate change and sustainability-related issues and they are supported in their efforts to formulate environment and/or sustainability policies of their own.
10. Owing to their great importance to the country's sustainable development, financial support shall be provided to investments in the areas of renewable energy, energy efficiency, resource efficiency, recycling, waste reduction, and environmental protection.

D. ENTRY INTO FORCE

This policy goes into effect as of the date on which it is approved by the Board of Directors.

Appendix. List of activities that are not to be financed

The activities listed below have been identified as "activities that are not to be financed by TSKB" effective the date on which the TSKB Sustainability Policy goes into effect. TSKB hereby commits itself not to knowingly involve in directly financing any project or activity entailing:

- The production or trade of a product which is illegal under Turkish laws or regulations or according to international rules or agreements or which is subject to any international ban;
- The production or trade of a product containing polychlorinated biphenyl (PCB);
- The production or trade of chemicals, pesticides, herbicides, or any other harmful substance that is internationally banned;
- The production of or trade in any internationally-banned substance that is harmful to the terrestrial ozone layer;
- Trade in wild fauna or flora; the manufacture of or trade in any product covered by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- The cross-border movement of any form of waste that is prohibited by Turkish law or international agreement;
- The production of or trade in firearms and/or munitions;
- The production of or trade in tobacco or tobacco products;
- Any undertaking involving gambling, casino operations or management, or the like;
- The production of or trade in any radioactive material;
- The production of or trade in unbonded (fibrous) asbestos (does not apply to the use or procurement of cement slabs less than 20% of whose weight consists of non-fibrous or fibrous asbestos);
- The use of drift nets measuring more than 2,500 meters in length in sea fishing;
- Any project involving forced labor; any project related to production that involves the exploitation of child labor or employs children in potentially injurious or dangerous activities;

- Any project that restricts individuals' personal rights or violates human rights;
- Any project that involves commercial logging operations in any primary tropical rainforest;
- Any activity that is prohibited by Turkish laws and regulations or by international agreements concerned with the protection of biodiversity resources or of the cultural heritage; any project located in any protected area, critical habitat area, or natural/cultural heritage area unless adequate compensatory/mitigatory measures are taken.

ANNEX 3. Environmental and OHS Legislation

Legislation	Objectives/Key Elements of Legislation	Relation to the Project	Governing Authority
Regulation on Soil Pollution Control and Point Source Polluted Areas (Latest amendment 11.07.2013 Official Gazette No: 28704)	Management of soil contamination at construction and operation stages. Remediation of contaminated sites.	In case of soil pollution caused during installation of solar panels, the regulation provisions apply.	Ministry of Environment and Urbanization and its provincial directorates
Regulation on Waste Management (Latest amendment 11.03.2017 Official Gazette No: 30016)	To determine, implement and develop policies and programs in controlling waste and hazardous waste formation, reduce-reuse-recycle of wastes, transfer, disposal methods, taking precautions not to be disposed environmentally harmful, defining storage conditions.	The regulation provisions apply for the hazardous and non-hazardous wastes produced. The wastes generated during construction and operation stages must be stored, labelled, transferred and disposed as per the regulation requirements.	Ministry of Environment and Urbanization and its provincial directorates
Regulation on Waste Oil Management (Latest amendment 12.01.2023 Official Gazette No: 32071)	Management of waste oils generated at construction and operation stages	The waste oils produced during construction and operation must be stored, labelled, transferred and disposed as per the regulation requirements.	Ministry of Environment and Urbanization and its provincial directorates
Regulation on Control of Waste Electrical and Electronic Equipment (WEE) (26.12.2022 Official Gazette No: 32055)	Management of WEEs generated at construction and operation stages	The WEEs produced during construction and operation must be stored, labelled, transferred and disposed as per the regulation requirements.	Ministry of Environment and Urbanization and its provincial directorates
Regulation on Packaging Waste Control (26.06.2021 Official Gazette No: 31523)	Management of packaging wastes generated at construction and operation stages	The packaging wastes produced during construction and operation must be stored, labelled, transferred and disposed as per the regulation requirements.	Ministry of Environment and Urbanization and its provincial directorates
Regulation on Control of Waste Batteries and Accumulators (23.12.2014 Official Gazette No: 29214)	Management of waste batteries and accumulators generated at the construction and operation stages	The waste batteries and accumulators produced during construction and operation must be stored, labelled, transferred and disposed as per the regulation requirements.	Ministry of Environment and Urbanization and its provincial directorates
Regulation on Excavation Soil, Construction and Demolition Waste Control	Transportation and disposal of excavation waste and construction debris at the construction stage	The excavation and demolition wastes produced during construction must be stored, labelled, transferred and disposed as per the regulation requirements.	Ministry of Environment and Urbanization and its

Legislation	Objectives/Key Elements of Legislation	Relation to the Project	Governing Authority
(Latest amendment 09.10.2021 Official Gazette No: 31623)			provincial directorates
Zero Waste Regulation (Latest amendment 09.10.2021 Official Gazette No: 31623)	The Regulation aims to establish and develop a zero-waste management system which will protect the environment, human health and resources	Zero waste system should be established by preventing/decreasing waste, re-use and recycling. The content of hazardous substances in waste should be reduced and the product should not be composed of substances harmful to environment and human health.	Ministry of Environment and Urbanization and its provincial directorates
Regulation on Occupational Health and Safety Services (Latest amendment 06.07.2021 Official Gazette No: 31533)	The purpose of this Regulation is the establishment of workplace health and safety units to be established to carry out occupational health and safety services, authorization of joint health and safety units, cancellation of authorization certificates, arranging their duties, authorities and responsibilities, working procedures and principles. The employer assigns one or more occupational physicians and occupational safety specialists among its employees who have the qualifications specified in the relevant regulations In order to determine the necessary occupational health and safety measures and to monitor their implementation, to prevent work accidents and occupational diseases, to carry out first aid and emergency treatment and preventive health and safety services for the employees. Workplace employers with ten or more employees in the very dangerous class also assign other health personnel. In the absence of qualified personnel at the workplace, the employer may fulfill all or some of the above-mentioned obligations by obtaining services from an authorized Joint Occupational Safety and Health Units.	During the construction phase of the RSPVs or DSPVs, the employer has to assign certified OHS staff and/or hire an authorized Joint Occupational Safety and Health Unit. Employers are obliged to provide the necessary convenience for the personnel assigned for occupational health and safety services to work effectively and to plan and arrange in this regard. Employees cooperate in the works to be carried out by those assigned by the employer to perform occupational health and safety services. Occupational health and safety services are provided in a way that does not impose a financial burden on employees.	MoLSS
Regulation on Occupational Health and Safety in Construction Works (Latest amendment 31.12.2018 Official	The purpose of this regulation is to determine the minimum occupational health and safety conditions to be taken in construction works. In construction works, in addition to the obligations specified in Article 4 of the OHS Law, the employer especially	This regulation has to be complied during the construction activities of the Program. Before the construction of the RSPVs or DSPVs, the health and safety plan shall be prepared or have it prepared by	MoLSS

Legislation	Objectives/Key Elements of Legislation	Relation to the Project	Governing Authority
Gazette No: 30642)	provides the constructions specific precautions. The employer or project manager ensures that the health and safety plan is prepared during the preparation phase of the project before starting the construction work. Health and safety plan is the plan prepared or provided to be prepared by the employer or project manager responsible for the entire building area in order to evaluate possible risks and determining responsibilities, organizational structure, working methods regarding health and safety during the construction works.	the employer or project manager. The employer ensures that the machinery, tools, equipment, materials and working methods used in the workplaces where construction works are carried out comply with the relevant technical legislation and accepted, harmonized national or international standards in terms of occupational health and safety.	
Regulation on Use of Personal Protective Equipment at Work (02.07.2013 Official Gazette No: 28695)	The purpose of this regulation is to determine the procedures and principles regarding the characteristics, supply, use and other issues of personal protective equipment to be used in cases where the prevention or adequate reduction of risks in the workplace cannot be achieved through collective protection based on technical measures or work organization or working methods.	During the construction and operation phases of the Program, personal protective equipment has to be used, when needed. The employer determines the occupational health and safety measures to be taken as a result of the risk assessment to be made and the personal protective equipment to be used. Employees are obliged to correctly use, protect, and properly store the personal protective equipment provided to them in accordance with the training they receive on occupational health and safety and the instructions of the employer on this subject.	MoLSS
Regulation on the Protection of Employees from Noise Related Risks(28.07.2013 Official Gazette No: 28721)	The purpose of this Regulation is to determine the minimum requirements for the protection of employees from health and safety risks, especially hearing-related risks, that may occur as a result of exposure to noise. • Lowest exposure action values: (LEX, 8h) = 80 dB(A) • Highest exposure action values: (LEX, 8 hours) = 85 dB (A) • Exposure limit values: (LEX, 8h) = 87 dB(A)	Considering the construction activities of the Program, the employer considers the noise level that the employees are exposed to in the risk assessment carried out at the workplace and determines the exposure by making noise measurements when necessary, according to the results of the risk assessment. In addition, the employer selects the appropriate work equipment that emits the lowest possible level of noise	MoLSS

Legislation	Objectives/Key Elements of Legislation	Relation to the Project	Governing Authority
	The exposure of the worker cannot exceed the exposure limit values in any case.	according to the work done and provides the necessary information and training to the employees to use the work equipment correctly and safely.	
Regulation on Vocational Education of Those to Be Employed in Dangerous and Very Dangerous Jobs (Last Amendment 11.05.2017 Official Gazette No: 30063)	The purpose of this regulation is to regulate the procedures and principles of the vocational training of the employees in the dangerous and very dangerous jobs determined according to the Occupational Health and Safety Law. It is obligatory for those who will work in the jobs listed in Annex-1 of the Regulation to undergo vocational training before being hired.	The Annex-1 of the regulation includes all kinds of above-ground and underground construction and all kinds of repair and strengthening and similar works and the use of tools, materials, fixed facilities and equipment necessary for these works. Therefore, employees who will actually work at construction activities of the Program must receive vocational training appropriate to their job.	MoLSS
Regulation on Suspension of Work in Workplaces (Last Amendment 11.02.2016 Official Gazette No: 29621)	The purpose of this regulation is to stop the work until this danger is eliminated in a part or all of the workplace in the following cases: • when a life-threatening issue is detected for the employees in the buildings and annexes, working methods and forms or work equipment in the workplace • In cases where a risk assessment has not been made in mining, metal and construction works, which are in the very dangerous class, and in workplaces where hazardous chemicals are used or where major industrial accidents may occur. In addition, the procedures and principles of allowing the resumption of work in the workplace where the decision to stop according to the regulation has been applied are specified in this regulation.		MoLSS
Regulation on Emergency Situations in Workplaces (Last Amendment 01.10.2021 Official Gazette No: 31615)	Emergency situations are the events that require emergency intervention, struggle, first aid or evacuation such as fire, explosion, spread of dangerous chemicals, natural disasters that may occur in the whole or part of the workplace. The purpose of this regulation is to regulate the procedures and principles regarding the preparation of emergency plans in the workplaces, the work to be done on prevention, protection, evacuation, firefighting, first	In the scope of the Program activities, employers are obliged to determine possible emergencies by pre-evaluating the emergencies that may occur and affect the employee and the working environment, taking into account the working environment, materials used, work equipment and environmental conditions. Employees, on the other hand, must comply with preventive	MoLSS

Legislation	Objectives/Key Elements of Legislation	Relation to the Project	Governing Authority
	aid and similar issues, and the safe management of these situations and the determination of the employees to be assigned in these matters.	and restrictive measures taken within the scope of the issues specified in the emergency plan prepared by the employer.	
Regulation on the Procedures and Principles of Employees' Occupational Health and Safety Training (Last Amendment 24.05.2018 Official Gazette No: 30430)	The purpose of this regulation is to regulate the procedures and principles of the occupational health and safety trainings to be given to the employees. In workplaces where the main employer-subcontractor relationship is established as specified in the seventh paragraph of Article 2 of the Labor Law, each employer is responsible for providing occupational health and safety trainings for their employees. In these workplaces, the main employer is informed by the subcontractor about the training of the subcontractor's employees. The main employer is obliged to check the documents regarding the occupational health and safety training of the employees of the subcontractor. In addition, the main employer informs the employees of the subcontractor about the risks specific to the workplace before starting work.	The employer ensures that basic trainings are given to its employees as soon as possible after the employee starts to work, including at least the subjects specified in Annex-1 of the regulation. Since the construction and maintenance activities to be carried out within the scope of the Program are classified as very dangerous workplaces, these trainings have to be repeated at least once a year, taking into account the changing and emerging risks.	MoLSS
Regulation on Health and Safety Conditions in the Use of Work Equipment (Last Amendment 18.02.2022 Official Gazette No: 31754)	The purpose of this regulation is to determine the minimum requirements to be complied with in terms of health and safety regarding the use of work equipment in the workplace. The employer takes all necessary measures to ensure that the work equipment to be used in the workplace is suitable for the work to be done and that this equipment does not harm the employees in terms of health and safety. When choosing work equipment, it takes into account the special working conditions in the workplace and the dangers in terms of health and safety and pays attention that the use of this equipment does not pose an additional hazard. If it cannot ensure that the work equipment is completely safe in terms of health and safety of the workers, it takes appropriate measures to reduce it to an acceptable risk level.	It is necessary to ensure compliance with the obligations specified in the regulation on the use and selection of work equipment to be used in construction and maintenance works to be carried out within the scope of the Program. Employees shall be given sufficient information and, if appropriate, written instructions regarding the work equipment. Also, employees assigned by the employer to use work equipment have to been provided with training on the risks that may arise from use of work equipment and the ways to avoid them.	MoLSS
Regulation on Duties, Authorities, Responsibilities and Training of	Occupational safety experts are defined as those who are authorized by the Ministry to work in the field of occupational health and safety and who have the occupational safety	Occupational safety experts who will work within the scope of the Program must have a valid certificate defined within the scope of the regulation.	MoLSS

Legislation	Objectives/Key Elements of Legislation	Relation to the Project	Governing Authority
Occupational Safety Experts (Last Amendment 06.07.2021 Official Gazette No: 31533)	expertise certificate and meet certain criteria. The purpose of this regulation is to regulate the qualifications, training and certification, duties, powers and responsibilities and working procedures and principles of occupational safety experts.	The employer must fulfill the measures regarding life-threatening issues such as fire, explosion, collapse, chemical leakage, which require an emergency stop of the work, which are notified in writing by the occupational safety expert, within a reasonable time to be determined. Otherwise, the occupational safety specialist is obliged to report this situation to the competent authority in writing.	
Regulation on Occupational Health and Safety Risk Assessment (Last Amendment 29.12.2012 Official Gazette No: 28512)	The purpose of this regulation is to regulate the procedures and principles of risk assessment to be made in terms of occupational health and safety at workplaces. The employer carries out a risk assessment in terms of occupational health and safety with the aim of ensuring, maintaining and improving the health and safety of the working environment and employees. The fact that the risk assessment has been carried out does not remove the employer's obligation to ensure occupational health and safety in the workplace. The risk assessment carried out by a team formed by the employer has to be for all workplaces, starting from the design or establishment phase, by identifying hazards, identifying and analyzing risks, deciding on risk control measures, documentation, updating the work done and following the renewal phases when necessary.	According to the regulation, the employer has to perform risk assessment and has the responsibility of taking all necessary measures to ensure occupational safety and health. Therefore, the employer shall fulfil the responsibility of avoiding risks, evaluating risks which cannot be avoided, combating the risk at its source, adapting the work and working conditions to the individual, adapting to technical progress, substituting dangerous substances or procedures with a non-dangerous or less dangerous ones, provide appropriate training and instructions to the workers, etc.	MoLSS

ANNEX 4. Land Acquisition

The legal basis for the acquisition of the land will be as follows:

1. Expropriation Law (Law No. 2942-approval date: 04.11.1983) and Laws concerning amendments to the Expropriation Law (which includes Law No. 4650-approval date: 24.4.2001 and other laws);
2. Municipal Law (Law No. 5393- approval date: 03.07.2005)

In the scope of Turkish legal framework, land acquisition/expropriation is based on the Expropriation Law No: 2942 (amended by Law No: 4650 in 2001). In addition, Article 46 of the Turkish Constitution explains that state and legal public entities, in cases of public benefit, are entitled to entirely or partially expropriate immovable properties in private possession, on condition that the real value of those immovable properties are paid in advance and in cash; and to establish easement rights on these immovable properties in compliance with the procedures and principles set by expropriation law. In other words; Constitution implies that any immovable property cannot be confiscated unless its expropriation compensation is paid to the owner/s in advance and in cash.

Compensation for the expropriated estate is determined pursuant to procedures and principles in Articles 8, 10 and 11 of the Expropriation Law No 2942. Valuation criteria are stated in the Article 11 of the Law. The Expropriation Law defines that determination of the compensation for the expropriated land depends on average annual net income derived from that land by taking into account rotation system, valuation of structures includes the calculation of construction unit prices, and valuation of plots (housing) depends on peer assessment. Valuation commission is internally established by the organization responsible for land acquisition and comprised of at least three members. In case of a necessity, this commission can get information from Chamber of Industry and Commerce, real estate agencies and other individual or institutional authorities that are specialized on those points.

Announcement

The valuation commission delivers valuation document to negotiation commission, which is internally established by responsible agency. This negotiation commission is also comprised of three members and conducts negotiations with property owners. Then, the Governorate or the municipality (on behalf of the project owner) notify the affected people through an official registered mail and invites them for negotiations. In the case of land and property owners, the notification mentions the intent to purchase the land through a negotiated settlement and clearly describe steps in the land acquisition process and provisions for litigation available to the landowner and relevant steps.

In case of the owners do not live on the land, reasonable efforts are made to reach them by: 1) local inquiries for current address research from villagers and village head (mukhtars), 2) inquiry of last known residence from land registry and cadaster records, and law enforcement records through their national identification number, and 3) official advertisement in newspaper pursuant to Article 10 of the Expropriation Law 2942. If the owners can still not be reached, the compensation for the land is deposited

in their name to a Bank account. The owner can withdraw the compensation at any point in time.

Transaction

The purchase of land and affected properties can take place through two processes: negotiated settlement, or court settlement.

Negotiated Settlement[14] [15]: The process for purchasing the land and the related immovable property through negotiated reconciliation, pursuant to the principles and procedures set out in Article 88 of Expropriation Law No.2942 and this RF. If the owner agrees to a negotiated settlement, then discussions between the owners and the Governorates of municipalities take place to finalize the transaction. Minutes of the proceedings regarding this agreement are signed by two sides. Then the expropriation compensation is paid to rightful owner within 45 days and the property is registered in the name of government following alienation. This way of purchase is considered as expropriation and the right to sue against this expropriation and amount of expropriation compensation cannot be processed. The project owner is aware that negotiations will last for no more than 3 months and will provide the landowner a description of the land acquisition steps and the owner's rights to due process and litigation at each step. Failure to reach a negotiated settlement will result in a court settlement.

Court Settlement: A court settlement will occur if: a) the negotiated settlement fails; or b) the owner, after receiving notification from the Governorate or from the municipality, declines to negotiate; c) in case of customary rights; d) in case of deceased or absentee owners. Prior to requesting a court settlement, rights to due process and litigation will be explained fully to the landowner.

A lawsuit will be filed by the Governorate or municipality with a relevant court of first instance for valuation and registration, pursuant to Article 10 of the Expropriation Law. The costs of the court process are born by the responsible agency according to the Expropriation Law. Particularly, in case of the court process cannot be concluded within 4 months, legal interest rate is applied to determined compensation amount as from this deadline.

In general, according to the article 12 of the Expropriation Law, if a land is partially expropriated and in case of the remaining part is not usable, this part shall also be expropriated upon the request of the owner within 30 days following receiving expropriation decision.

Involuntary Resettlement

In case of physical or economic resettlement comes into agenda in any project, the project owner which is responsible for land acquisition, can provide collaboration with other organizations related with

[15] Expropriation Law No.2942 Article 8; After the expropriation decision is taken, the administration that will make the expropriation can purchase the immovable property, its source or the easement rights on them by making an agreement with the property owner at every stage of the expropriation process, at the price of its own tender commission, if not, by the commission to be established for this purpose. The immovable property, resource or right of easement purchased in this way is deemed to have been acquired from its owner by expropriation. However, no objections can be filed against expropriation and its cost.

resettlement planning and implementation according to the Municipal Law (Law No. 5393).

ANNEX 5. TSKB Management Approach on Disposal of Damaged and/or End-Of-Life Solar Panels

TSKB closely follows up E&S related issues of the Borrowers' investments with an approach to cover construction, operation and decommissioning phases. According to researches around the globe, it is considered that PV module/panel recycle and disposal will be essential in the world's transition to a more sustainable and low carbon economy. In that sense, TSKB endeavors to develop proactive and encouraging engagement with its stakeholders to avoid not only economic loss but also harmful impacts of disposal of damaged or end-of-life solar panels financed through its loans.

TSKB sets principles to handle with the issue in three pillars as defined below:

- Engagement with Borrowers that develop solar power plant projects, regardless of their scale:

TSKB assesses E&S management capacity of Borrowers and seeks for good practices defined in projects' Environmental and Social Management Plans in order to ensure disposal of damaged and/or end-of-life solar panels will be conducted properly. The Borrowers are informed about components of the investments to be utilized in panel disposal/decommissioning phase.

- Engagement with Borrowers that manufacture solar power plant components, including panel, inverter, etc.

TSKB encourages its Borrowers to adopt cradle to cradle business approach, which requires assessment of recycling and material recovery potential of the goods produced. That is supported through the proposed loan facilities involving finance of R&D investments since the existing recycling and/or recovery technologies need to be improved.

- Engagement with policy makers and NGOs:

TSKB believes that adequate waste management is able to be performed with robust and accurate legislation. TSKB intends to attend relevant NGO events and/or consultation meetings with policy makers to highlight the importance of the integration of PV module disposal practices to national waste management legislation. In addition, TSKB takes on interest in bringing the issue to policy makers to facilitate development of "PV Waste Management Regulation". At the end, this approach will further support the PV industry, reduce the import costs of the country for the raw material supply, protect environment, develop recycling industry and create employment.