Concept Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

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I. BASIC INFORMATION

A. Basic Operation Data

Operation ID	Product	Operation Acronym	Approval Fiscal Year
P500560	Investment Project Financing (IPF)	STEEM	2024
Operation Name	Sustainable Transition to Energy Efficiency in Moldova [STEEM]		
Country/Region Code	Beneficiary country/countries (borrower, recipient)	Region	Practice Area (Lead)
Moldova	Moldova	EUROPE AND CENTRAL ASIA	Energy & Extractives
Borrower(s)	Implementing Agency(ies)	Estimated Appraisal Date	Estimated Board Date
Ministry of Energy	Moldova Project Implementation Unit (MPIU)	16-Apr-2024	31-May-2024
Estimated Concept Review Date	Total Project Cost		
27-Jul-2023	50,000,000.00		

Proposed Development Objective

To mitigate energy security and affordability risks through energy efficiency investments for public buildings and sustainable heating technologies

B. Is the operation being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project Activities

The unprecedented rise in energy prices and high uncertainty in energy supplies in Moldova from Q3 2021 and acceleration of these trends in Q3 2022, threatens the social, economic, and political stability of the country and its ambitious development goals. Moldova's economic development is highly dependent on energy price and supply issues, and hence the adoption and implementation of appropriate measures in the energy sector will hold the key to the country’s future development. The project involves a program structured by a multi-phase approach (MPA) consisting of two sequential overlapping phases over a period of seven years, offering Moldova an assured funding source with a focused national objective of increasing energy security through an immediate, comprehensive, and sustained Energy

Efficiency (EE) program. The proposed MPA will facilitate the achievement of the Government of Moldova's goal of reducing exposure to external energy price shocks and increasing energy security through a longer-term, adaptive, and continuous engagement. The program is designed to improve energy security through targeted interventions that address gaps in EE (including rooftop solar systems) and sustainable heating and improve the overall enabling environment for these investments, with a pro-poor focus. Phase 1: Establishing the foundations for EE support mechanisms (USD 50 million), structured in four components: Component 1 – EE Renovations in Public Buildings (Estimated budget USD 20 million). This component will finance simple to deep renovation in public buildings, and also install solar panels and potentially battery storage where deemed viable. Primary focus of this component is on educational buildings, but it will include also buildings owned or occupied by central and local public authorities. Selection and prioritization of the buildings will be done in strict coordination with relevant national authorities. Component 2 - District Heating Improvements (Estimated budget USD 25 million). This component will finance investments in further optimization of the district heating (DH) operated by Termoelectrica based on the knowledge and experience gained during implementation of previous WB projects. Primary focus of this component is on making improvements in district heating networks, particularly through installation of IHSs and other related investments, resulting in about 10 percent of energy savings and increased quality level of DH services to consumers. Implementation of this component will be coordinated to the extent possible with investments by the EEA/REEF in buildings and component 1. Project aims at implementing about 250-300 IHSs per year. This component aims also to pilot and then scale-up investments in sustainable biomass use in DH through conversion of the suburban gas-fired heat plants (HPs) into biomass-based. Component 3 - Piloting financing mechanisms for Residential Energy Efficiency (Estimated budget: USD 3 million). This component will finance a pilot for simple- to deep renovation in residential multifamily buildings (MFBs) with integration of the most feasible and efficient heating and RE solutions. The pilot will be designed to leverage commercial financing from local financing institutions and will include a grant component to incentivize demand. Component 4. Implementation support and Technical assistance (USD 2 million IBRD, Recipient executed TF (grants, tbc): This component will finance PIU costs, complement to the salaries of public servants involved in the implementation as needed, as well as consultancy services potentially co-financed with grant support such as: consultancy services for subproject preparation, supervision and monitoring; regulatory support to further energy efficiency renovations, in coordination with other donors. Phase 2: Scaling-up Energy efficiency Support in Moldova (USD 50 million). The scope and structure of this phase is preliminary and could be adjusted if needed before approval of phase 2, to incorporate lessons learned and gaps identified during phase 1: Component 1. Scale-up of renovation of public buildings (USD 10 million). This component will co-capitalize and scale up the use of revolving and SUPER ESCO schemes (developed and operationalized during Phase 1) to support the renovation of central and municipal public buildings and potentially street lighting). Component 2. District heating scale-up (USD 20 million). This component will scale up the investments in efficient and sustainable district heating based on the lessons learned from phase 1. The Bank project team will explore options to leverage climate finance and donor support for this component. Component 3 (USD 20 million). Starting-up investments and financial mechanisms for the Renovation of multifamily (and potentially single-family buildings). This component will support, in collaboration with other donors and the Energy Efficiency Agency, the financing and/or establishment of incentives for the renovation of MFAs and SFHs. This may include working with banks to develop green financial products such as warm loans, clean energy and home energy efficiency improvement loans, and concessional loans for ESCOs. Eligible measures could include simple to deep renovations and replacement of heating sources with more sustainable options (e.g., wood chips/pellets, heat pumps), Demand side control systems, and rooftop solar systems. The Bank project team will explore options to leverage climate finance and donor support for this component. Component 4. Implementation support and Technical assistance. (USD 1 million IBRD and/or RETF (tbc): This component will finance PIU and other implementation costs as needed as well as additional Technical assistance building on phase 1, including: support for energy audits, designs; policy and regulatory support for

expanding energy efficiency renovations; detailed feasibility studies to inform future government programs and IFIs projects; development of residential program guides, trainings, communications, outreach, and behavior change campaigns The proposed MPA is well aligned with the draft Moldova CPF (FY23-27) currently under consultation.

D. Environmental and Social Overview

D.1 Overview of Environmental and Social Project Settings

The MPA Program will be implemented nationwide and exact locations will depend on selection of subproject activities. By encouraging investment in renewables, Moldova could reduce its reliance on imported natural gas while maximizing the consumption of domestic energy resources. Despite the large potential for wind and solar power, its deployment has been very modest to date, with only 120 MW of installed capacity as at the beginning of 2022. Bioenergy use is mostly of firewood in inefficient boilers and stoves and might induce deforestation. Forests cover about 11-12 percent of Moldova's land area. A major factor that causes fluctuation in biomass supply is the regional and seasonal availability, where some biomass can only be harvested in certain periods in certain regions. This poses a huge threat to the reliability of the biomass supply chain. Some studies have also pointed to the influence of climate change on the harvesting of various crops. Residential energy efficiency development is significantly complex given its heterogeneous nature and the presence of multifamily housing and Home Owners Associations, norm-based billing for heating, lower income levels and creditworthiness, lower levels of comfort (under-heating), and individual homeowner behaviour. Engagement across a broad range of stakeholders including local governments, homeowners associations, developers, and energy utilities is needed to agree on participation. Factors inhibiting participation include the relatively high initial investment required by each apartment owner in the context of economic contraction, inflation and pressure on energy prices exacerbated by the COVID-19 pandemic and war in Ukraine. Public dissatisfaction with utility services can be addressed by implementing energy efficiency programs that improve comfort levels in buildings, provide local jobs, and reduce energy bills.

D.2 Overview of Borrower's Institutional Capacity for Managing Environmental and Social Risks and Impacts

The implementing agency for the Program is the Ministry of Energy (MoE). Arrangements may include MoE's subsidiaries and other agencies: Energy Efficiency Agency (EEA, the existing PIU established for Second District Heating Efficiency Improvement Project (DHEIP2), and National Regional Development Fund (NRDF). MoE will (i) approve the overall framework, Operations Manual (OM), subproject criteria; and (ii) ensure intra-ministerial coordination and communication. A Steering Committee, chaired by MoE, will be established to ensure coordination within Government Agencies. Day-to-day project implementation will be delegated to the PIU established under MoE. These roles and responsibilities will be reflected in a Subsidiary Agreement between MoE and PIU, as well as in the OM. The PIU will have primary responsibility for project implementation. and will be staffed with at least one environmental specialist and one social specialist. Termoelectrica SA, the key energy utility provider will be required to hire staff to manage and implement any environmental and social (E&S) risk management measures required for subprojects under the operation. Termoelectrica SA has been ISO 140001 compliant since 2020, has an environmental department and a labour department and has established in house systems for grievance redress and stakeholder engagement. The PIU will coordinate with the MoE to oversee and achieve permits and any necessary assessments associated with project works. The implementing agency has experience implementing DHEIP2 (P172668),. The implementing agency has experience with the Bank's Safeguards Policies and has received introductory training on the Environmental and Social Framework (ESF). However, the Borrower's capacity to manage environmental and social risks need to be enhanced. Capacity building activities will be included into the Environmental and Social Commitment Plan (ESCP).

II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC)

Moderate

A.1 Environmental Risk Rating

Moderate

The environmental risk of the project is assessed as Moderate. Overall, the project is likely to generate some environmental impacts related to the energy efficiency (EE) investments, but also to bring positive impacts in terms of energy conservation and reduction of GHG emissions and air pollution. The environmental impacts related to the project activities under Phase 1 and Phase 2 are expected to be predictable, temporary, low in magnitude, and site specific without likelihood of impacts beyond the actual footprint of the project, reversible, and manageable in a predictable manner through the implementation of cost-effective mitigation measures in line with the national laws as well as the use of the World Bank Environmental & Social Standards (ESS), Environmental, Health, and Safety Guidelines (EHSG) and Good International Industrial Practices (GIIP). However, considering the project description and the planned activities primarily associated with small-scale EE civil works, key environmental issues will be related to (a) waste management including hazardous waste (potentially of asbestos containing material) during construction works; (b) occupational health and safety of workers; (c) community health and safety of residential population, staff and personnel as well as visitors during construction works; (d) disruption of regular activities as a result of construction noise pollution; (e) traffic disruption in residential areas (depending upon specific location), transport and traffic safety at construction sites; (f) old electrical appliances; etc. Risks and impacts related to Phase 2 will be similar to those of Phase 1. Additionally, activities proposed under Phase 2 include the rehabilitation of district heating networks which will also generate moderate environmental risks and impacts such as soil and air pollution; generation of noise and construction wastes, labor safety, etc.

A.2 Social Risk Rating

Moderate

The social risk of the MPA Program is classified as moderate. Social risks associated with the Phase 1 rehabilitation of public sector buildings and commercial buildings are likely to be low magnitude. Extension and rehabilitation of existing pipelines will not require land acquisition. The rehabilitation of public buildings may cause temporary disruption to services but does not pose any significant community health and safety concerns. Civil works are temporary and isolated to the building that will refurbished. It is unlikely to involve large-scale labour forces. Small groups of qualified technicians are required for installing thermal insulation, high-quality energy efficient windows, and advanced equipment. Forced labour in the global supply chain is an indirect risk associated with the solar panels and components procured and deployed for renewable energy generation. Applicable provisions and Forced Labor Performance Declarations will be included in procurement documentation to mitigate this risk. While the risk of sexual exploitation and abuse/sexual harassment (SEA/SH) associated with the Program's activities is assessed as low, preventative measures are required including labour codes of conduct and a grievance mechanism with measures for referral to specialized service providers. New models will be explored for utility companies to finance the high up-front investment costs and include them in regular utility payments with any increase in tariffs offset by energy cost savings. Further assessment is required to understand the impact of a scale up in transition to biomass energy generation on agricultural resources in order to ensure that commercial production of energy plants does not displace food supplies.

B. Relevance of Standards and Policies at Concept Stage

B.1 Relevance of Environmental and Social Standards

ESS1 - Assessment and Management of Environmental and Social Risks and Impacts Relevant

The proposed MPA Program will have investments in EE and distributed renewable energy investments in public and residential buildings, including possibly new technologies such as integrated solar PV with heat pumps for heating, and solar collectors for hot water heating, etc. While there will be benefits from the Program, some adverse E&S risks and impacts are expected. Since sub-projects sites and details are not known, the risks and impacts will be managed using an Environmental and Social Management Framework (ESMF). Considering the large number of subprojects, the ESMF will contain relevant measures (ESMP Checklist format) for different activities based on the identified risks. The PIU will be responsible for all documents; Contractor's plans, and overall ESMF, Labour Management Procedures (LMP) and Stakeholder Engagement Plan (SEP) and their implementation. The project will not finance any sub-projects categorized as substantial or high environmental and social risk.

ESS10 - Stakeholder Engagement and Information Disclosure Relevant

Key project-affected stakeholders are likely to be owners and users of buildings targeted for rehabilitation. The PIU will prepare an SEP by Appraisal which will identify potential project-affected and other interested parties and will outline measures for engagement with these stakeholders. The SEP will be prepared based on preliminary consultations with stakeholders. The SEP will specify the institutional roles and responsibilities, timeline, and budget for conducting the stakeholder engagement. The PIU will establish a project-level GM and maintain it throughout project implementation dedicating sufficient resources, and staff time to GM management. The GM will be revised to update provisions for appropriate procedures and capacity to handle complaints associated with SEA/SH including referral to specialist national service providers. The SEP including the GM will be publicly disclosed, consulted, revised, and updated.

ESS2 - Labor and Working Conditions Relevant

The Program is expected to involve a limited number of direct and contracted workers. The labour and construction materials are expected to be sourced locally. Subprojects are not expected to involve significant risks to labour and working conditions. The LMP will address expected number and type of workers, key gaps between ESS2 and national requirements, Occupational Health and Safety (OHS), adequate working conditions, terms of contract, adequate living conditions in the unlikely event of work camps, labour influx and a functioning grievance mechanism for workers, and codes of conduct to prevent and manage risk of SEA/SH. The government has established institutional mechanisms for the enforcement of laws and regulations on child labour. Forced labour in the global supply chain is a risk in the procurement and use of solar panels and components and will be managed through applicable provisions in procurement documentation.

ESS3 - Resource Efficiency and Pollution Prevention and Management Relevant

Phase 1, besides civil works and construction activities on public buildings, multi-family apartments and single-family homes as well as possibly new EE technologies, aims also to pilot and then scale-up investments in sustainable biomass use in DH through conversion of the suburban gas-fired heat plants (HPs) into biomass-based. Outside of contributing carbon dioxide emissions, burning biomass in a solid, liquid, or gaseous state can also emit other pollutants and particulate matter into the air, including carbon monoxide, volatile organic compounds, and nitrogen

oxides. These will be mitigated by specific measures for the improvement of the combustion process and/or fuel quality improvement, together with the application of flue gas cleaning technologies. The ESMF will cover treatment of pollution prevention and management aspects associated with all proposed civil works and direct impacts of construction, including air, water, noise, waste pollution.

ESS4 - Community Health and Safety Relevant

The Program's activities pose minor site-specific risk of adverse impacts on the health and safety of beneficiaries and surrounding tenants and staff during retrofitting and renovation of buildings.. Potential threats to people and communities may be posed by uncovered or non-barricaded or not signposted excavated sites, trenches, open holes, open electric cables, etc. Other potential risks include exposure to asbestos-containing materials during the replacement of old-heating systems and construction-related nuisances such as dust, noise and traffic. Refurbishment of district heating networks of pipes is likely to involve some temporary disruption to traffic and road access. All mitigation measures required for ensuring health and safety, including on SEA/SH, of individuals and communities residing in and around sites where activities will take place will be included into ESMF and contract of works and made mandatory for adherence by works contractors.

ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement Not Currently Relevant

There is no anticipated requirement for land acquisition and no physical or economic displacement associated with the energy efficiency measures. Rehabilitation to public buildings, apartments, and measures designed for individual homes, do not require land acquisition. Replacement of old pipes with new pre-insulated ones for the rehabilitation of district heating networks takes place on existing public land with minor easements and will be screened and redesigned to avoid impacts involving physical or economic displacement. Rehabilitation works may require minor, temporary, and mostly insitu, relocation of building inhabitants during the rehabilitation period. Any buildings that would require land acquisition and thus trigger ESS5 will not be eligible for energy efficiency. Provisions for relocation actions will be described in the ESMF.

ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources Not Currently Relevant

No civil works activities under the Phase 1 are expected to have any impacts on natural habitats or biodiversity, given their limited scale and location within the existing urban communities of Moldova. Nonetheless, some aspects of this standard may be relevant in the context of broader environmental and social implications of decarbonization and scale up of biomass associated with the project, including the pressure on agricultural production for food source. The project will include EE activities to fostering market-based business practices to develop sustainable supply chains for biomass, especially biomass fuels produced from waste and residues derived from forestry and from agricultural land. To mitigate the potential negative impact by scaling up transition to biomass energy generation on agricultural resources the Program will consider particular conditions that all these activities shall meet the detailed criteria (in accordance with the EU practices) to minimize the risks.

ESS7 - Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities Not Currently Relevant

No indigenous peoples who meet the criteria described under this standard reside in the territory of Moldova.

ESS8 - Cultural Heritage Not Currently Relevant

The Program is unlikely to pose an impact on known tangible built, or intangible cultural heritage. Buildings recognized as valuable from an architectural, aesthetic, spiritual or socio-cultural perspective are not expected to be included in refurbishment. Buildings will be screened to both identify any protected buildings and for potential impacts on and access to buildings, sites and practices. The Moldovan Ministry of Culture will be consulted as part of the screening process as well as other relevant stakeholders. The ESMF will have procedures in case of buildings falling under cultural registry lists of the country are included. The procedures will be in line with national requirements and requirements of this Standard. The ESMF will contain an elaborated cultural heritage management plan for the buildings of special concern/preservation status together with Chance Find Procedures for all earth-moving sub-projects (e.g. rehabilitation of district heating networks).

ESS9 - Financial Intermediaries Not Currently Relevant

This standard is not relevant under Phase 1.

B.2 Legal Operational Policies that Apply

OP 7.50 Operations on International Waterways	No
OP 7.60 Operations in Disputed Areas	No

B.3 Other Salient Features

Use of Borrower Framework No

The Borrower's framework will not be used for the project. However, the proposed operation will comply with relevant national legal and regulatory requirements.

Use of Common Approach No

No financing partners identified

C. Overview of Required Environmental and Social Risk Management Activities

C.1 What Borrower environmental and social analyses, instruments, plans and/or frameworks are planned or required by Appraisal?

The following E&S documents will be prepared by the Borrower by appraisal: Environmental and Social Management Framework (ESMF), Stakeholder Engagement Plan (SEP), Labour Management Procedures (LMP), and Environmental and Social Commitment Plan (ESCP).

Since sub-projects sites and details are not yet known, the identified risks and impacts will be addressed in ESMF. The ESMF will provide selection and screening criteria to be applied for the identification of sub-project sites and will identify typical environmental and social risks likely to occur during the project implementation, specify legislative and regulatory framework, consider procedures and institutional responsibilities. Considering the large number of

subprojects, the ESMF will contain generic mitigations and monitoring plan (ESMP Checklist format) for different activities like based on the identified risks. All Technical Assistance (TA) activities under the project conducted for subprojects preparation and for developing feasibility/technical studies for priority EE investment projects and biomass energy generation assessment will be based on TORs prepared in line with the WB's ESF. The ESMF will provide monitoring requirements as well as roles and responsibilities for ensuring effective implementation of the ESMF requirements throughout the project lifecycle.

The PIU will prepare an SEP by Appraisal which will identify potential project-affected and other interested parties and will outline measures for engagement with these stakeholders. The SEP will be prepared based on preliminary consultations with stakeholders. The SEP will specify the institutional roles and responsibilities, timeline, and budget for conducting the stakeholder engagement. The PIU will establish a project-level GM and maintain it throughout project implementation dedicating sufficient resources, and staff time to GM management. The GM will be revised to update provisions for appropriate procedures and capacity to handle complaints associated with SEA/SH including referral to specialist national service providers. The SEP including the GM will be publicly disclosed, revised, and updated.

The LMP will outline the expected number and type of workers, key gaps between ESS2 and national legislation and regulations that need to be addressed, as well as monitoring and supervision arrangements. Key aspects of the LMP pertaining to contracted workers, such as Occupational Health and Safety (OHS), adequate working conditions, terms of contract, adequate living conditions in the unlikely event of work camps, labour influx and a functioning grievance and redress mechanism for workers, will be included in Contractors' ESMP. The LMP will also include codes of conduct to prevent and manage incidents of SEA/SH. The LMP will include measures to ensure that contractors screen for and monitor activities to prevent occurrences of SEA/SH and that grievance mechanisms are available for direct and contracted workers.

III. CONTACT POINT

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V. APPROVAL

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