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Report No: PAD00201

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF EUR 32.4 MILLION (US\$35 MILLION EQUIVALENT)

TO

GEORGIA

FOR AN

ENHANCING ENERGY SECURITY THROUGH POWER INTERCONNECTION AND RENEWABLE ENERGY PROGRAM (P179950)

AS PHASE 1 OF A MULTI-PHASE PROGRAMMATIC APPROACH

WITH AN OVERALL FINANCING ENVELOPE OF US\$500 MILLION

April 25, 2024

Energy and Extractives Global Practice Europe and Central Asia Region

This document is being made publicly available prior to Board consideration. This does not imply a presumed outcome. This document may be updated following Board consideration and the updated document will be made publicly available in accordance with the Bank's policy on Access to Information.

CURRENCY EQUIVALENTS

(Exchange Rates Effective February 29, 2024)

| Currency Unit = | Georgian Lari (GEL) |
|-----------------|---------------------|
| US\$1 = | GEL 2.66 |
| US\$1 = | EUR 0.92 |

FISCAL YEAR January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

| AC/DC | Alternating Current/Direct Current |
|-----------|--|
| AM | Accountability Mechanism |
| AZ | Azerbaijan |
| BSSC | Black Sea Submarine Cable |
| CASA-1000 | Central Asia-South Asia Electricity Transmission and Trade Project |
| CCB | Climate Co-Benefit |
| CfD | Contract-for-Difference |
| CPF | |
| | Country Partnership Framework |
| DA | Designated Account |
| DFIL | Disbursement and Financial Information Letter |
| E&S | Environmental and Social |
| ECA | Europe and Central Asia |
| EEZ | Exclusive Economic Zone |
| EIRR | Economic Internal Rate of Return |
| ENPV | Economic Net Present Value |
| ENTSO-E | European Network of Transmission System Operators for Electricity |
| ESF | Environmental and Social Framework |
| ESIA | Environmental and Social Impact Assessment |
| ESPIRE | Enhancing Energy Security through Power Interconnection and Renewable Energy |
| ESRFRP | Energy Supply Reliability and Financial Recovery Project |
| ESS | Environmental and Social Standards |
| EU | European Union |
| EUR | Euro |
| FID | Final Investment Decision |
| FM | Financial Management |
| FMM | Financial Management Manual |
| FY | Fiscal Year |
| GCP | Global Challenges Program |
| GDP | Gross Domestic Product |
| GE | Georgia |
| GHG | Greenhouse Gas |
| GNERC | Georgian National Energy and Water Supply Regulatory Commission |
| GRS | Grievance Redress Service |
| GSE | Georgian State Electrosystem |
| HU | Hungary |
| HVDC | High-Voltage Direct Current |
| IBRD | International Bank for Reconstruction and Development |
| ICR | Implementation Completion and Results Report |
| IDA | International Development Association |
| IEA | International Energy Agency |
| IFC | International Finance Corporation |
| IFI | International Financial Institution |
| IFR | Interim Financial Report |
| IPF | Investment Project Financing |
| IPRD | International Projects and Reporting Department |
| ISP | Internet Service Provider |
| IWG | Interministerial Working Group |
| JV | Joint Venture |
| LT-LEDS | Long-Term Low Emission Development Strategy |
| M&E | Monitoring and Evaluation |
| | <u> </u> |

| MFD-EP | Maximizing Finance for Development-Enabling Project | | |
|--------|---|--|--|
| MI | Mass-Impregnated (submarine cable technology) | | |
| MIGA | Multilateral Investment Guarantee Agency | | |
| MoESD | Ministry of Economy and Sustainable Development | | |
| MoU | Memorandum of Understanding | | |
| MPA | Multiphase Programmatic Approach | | |
| NDC | Nationally Determined Contribution | | |
| NECP | National Energy and Climate Plan | | |
| OHL | Overhead Line | | |
| PCE | Private Capital Enabled | | |
| PCM | Private Capital Mobilized | | |
| PDO | Project Development Objective | | |
| PforR | Program-for-Results | | |
| PIE | Project Implementing Entity | | |
| PMI | Project of Mutual Interest | | |
| POM | Project Operations Manual | | |
| PPSD | Project Procurement Strategy for Development | | |
| PrDO | Program Development Objective | | |
| PV | Photovoltaics | | |
| QII | Quality Infrastructure Investment | | |
| RAP | Resettlement Action Plan | | |
| RE | Renewable Energy | | |
| RO | Romania | | |
| RPF | Resettlement Policy Framework | | |
| SEA/SH | Sexual Exploitation and Abuse/Sexual Harassment | | |
| SEP | Stakeholder Engagement Plan | | |
| SOE | Statement of Expenditures | | |
| STEP | Systematic Tracking of Exchanges in Procurement | | |
| TA | Technical Assistance | | |
| tbc | To be confirmed | | |
| Tbps | Terabits per second | | |
| TGSP | Transmission Grid Strengthening Project | | |
| TSO | Transmission System Operator | | |
| TYNDP | Ten-Year Network Development Plan | | |
| UA | Universally Aligned | | |
| UNCLOS | United Nations Convention on the Law of the Sea | | |
| UXO | Unexploded Ordnance | | |
| VSC | Voltage Source Converter | | |
| XLPE | Extruded Cross-linked Polyethylene (submarine cable technology) | | |



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| | The World Ba |
|----|------------------|
| A) | Enhancing Energy |

| DATASHEET | | | | | |
|---|--|--|---|----------------------------------|-----|
| BASIC INFORMATION | | | | | |
| Project Beneficiary(ies) Georgia | Operation Name Enhancing Energy Security through Power Interconnection and Renewable Energy Program | | | | |
| Operation ID P179950 | Financing Instrument Investment Project Financing (IPF) | ng Instrument Environmental and Social Risk Classification High | | | |
| Financing & Impleme | entation Modalities | | | | |
| [] Multiphase Programmatic Approach (MPA) [] Contingent Emergency Response Component (CERC) | | | | Response Component (CERC) | |
| [] Series of Projects (SOP) | | | [] Fragile Stat | te(s) | |
| [] Performance-Based Conditions (PBCs) | | | [] Small State | e(s) | |
| [] Financial Intermediaries (FI) | | [] Fragile within a non-fragile Country | | | |
| [] Project-Based Guar | antee | | [] Conflict | | |
| [] Deferred Drawdown | | | [] Responding to Natural or Man-made Disaster | | |
| [] Alternative Procurement Arrangements (APA) | | | [] Hands-on Expanded Implementation Support (HEIS) | | |
| | | | | | |
| Expected Approval Date | te Expected Clo | Expected Closing Date | | te Expected Program Closing Date | |
| 21-May-2024 | 30-Jun-2029 | 30-Jun-2029 | | 31-Mar-20 | 034 |
| Bank/IFC Collaboration | 1 | | | | |
| No | | | | | |

MPA Program Development Objective

Improve Georgia's institutional capacity for the development of submarine cable projects, strengthen Georgia's domestic power transmission system, and establish a direct electricity interconnection and increase direct digital connectivity capacity between the South Caucasus and Southeast Europe.

MPA FINANCING DATA (US\$, Millions)

MPA Program Financing Envelope

500.00

Components

| Component Name | Cost (US\$) |
|---|---------------|
| Black Sea seabed surveys | 30,000,000.00 |
| Legal and financial advisory and technical assistance | 5,000,000,00 |

Organizations

Borrower:

Georgia

Implementing Agency:

Georgian State Electrosystem

MPA FINANCING DETAILS (US\$, Millions)

| MPA Financing Envelope: | 500.00 |
|-----------------------------------|--------|
| of which Bank Financing (IBRD): | 500.00 |
| of which Bank Financing (IDA): | 0.00 |
| of which Other Financing sources: | 0.00 |

PROJECT FINANCING DATA (US\$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)? Yes

Is this project Private Capital Enabling (PCE)? No

SUMMARY

| Total Operation Cost | 35.00 |
|----------------------|-------|
| Total Financing | 35.00 |
| of which IBRD/IDA | 35.00 |
| Financing Gap | 0.00 |

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)

35.00

Expected Disbursements (US\$, Millions)

| WB Fiscal Year | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|-------------------|------|------|-------|-------|-------|-------|-------|
| Annual | 0.00 | 5.00 | 8.50 | 8.00 | 8.00 | 4.50 | 1.00 |
| Cumulative | 0.00 | 5.00 | 13.50 | 21.50 | 29.50 | 34.00 | 35.00 |

PRACTICE AREA(S)

Practice Area (Lead)

Contributing Practice Areas

Energy & Extractives

Digital Development

CLIMATE

Climate Change and Disaster Screening

Yes, it has been screened and the results are discussed in the Operation Document

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

| Risk Category | Rating |
|---|-------------------------------|
| 1. Political and Governance | Moderate |
| 2. Macroeconomic | • Low |
| 3. Sector Strategies and Policies | Substantial |
| 4. Technical Design of Project or Program | Moderate |
| 5. Institutional Capacity for Implementation and Sustainability | Moderate |
| 6. Fiduciary | Substantial |



The World Bank

Enhancing Energy Security through Power Interconnection and Renewable Energy Program (P179950)

| Financial Management Risk rating from Specialist: | |
|---|--------------|
| Moderate as of 2024-03-28T14:24:02Z | |
| Procurement Risk rating from Specialist: Substantial as of 2024-02-20T18:32:42Z | |
| 7. Environment and Social | |
| Environment Risk rating from Specialist: | |
| • High as of 2024-03-04T09:35:22Z | High |
| Social Risk rating from Specialist: | |
| Moderate as of 2024-03-04T09:35:22Z | |
| 8. Stakeholders | Substantial |
| 9. Other | Substantial |
| 10. Overall | Moderate |
| Overall MPA Program Risk | High |
| | |
| | |
| POLICY COMPLIANCE | |
| | |
| Policy Does the project depart from the CPF in content or in other significant respect | cs? |
| [] Yes [√] No | |
| | |
| Does the project require any waivers of Bank policies? | |
| [] Yes [√] No | |
| | |
| I | |
| ENVIRONMENTAL AND SOCIAL | |
| Environmental and Casial Standards Balancinas Cinas its Contact at the Time | of Amounical |
| Environmental and Social Standards Relevance Given its Context at the Time | |
| E & S Standards | Relevance |
| ESS 1: Assessment and Management of Environmental and Social Risks and Impacts | Relevant |
| ESS 10: Stakeholder Engagement and Information Disclosure | Relevant |
| ESS 2: Labor and Working Conditions | Relevant |
| ESS 3: Resource Efficiency and Pollution Prevention and Management | Relevant |
| ESS 4: Community Health and Safety | Relevant |
| ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlemen | t Relevant |
| | |

| ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources | Relevant |
|---|------------------------|
| ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities | Not Currently Relevant |
| ESS 8: Cultural Heritage | Relevant |
| ESS 9: Financial Intermediaries | Not Currently Relevant |

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

LEGAL

Legal Covenants

Sections and Description

| Conditions | | | |
|---------------|------------------|---|----------|
| Туре | Citation | Description Financing Source | |
| Effectiveness | Section 5.01 (a) | The Subsidiary Agreement has been executed on behalf of the Borrower and the PIE. | IBRD/IDA |
| Effectiveness | Section 5.01 (b) | The PIE has adopted the Operational Manual, in form and substance satisfactory to the Bank. | IBRD/IDA |



I. STRATEGIC CONTEXT

- 1. The Black Sea Submarine Cable (BSSC) Project represents one of the most strategic and ambitious energy and digital connectivity initiatives in the South Caucasus and Southeast Europe, with landing points in Georgia and Romania. The BSSC Project would include parallel electricity and fiber-optic submarine cable interconnections across the Black Sea. Increased electricity trade through the electricity interconnection is expected to enable renewable energy (RE) development in the South Caucasus and contribute to the decarbonization of energy supply, enhanced energy security, and electricity supply reliability on both sides of the interconnection. The digital interconnection would reduce internet connection costs, improve bandwidth, and build redundancy for international digital connectivity across the Black Sea. Besides Georgia and Romania, there is interest from Hungary, Azerbaijan, Armenia, Bulgaria, and potentially other countries in the region to participate in the development and financing of the BSSC Project.
- 2. With the proposed Enhancing Energy Security through Power Interconnection and Renewable Energy (ESPIRE) Multiphase Programmatic Approach (MPA) Program, the World Bank will support the preparatory activities for the BSSC Project (Phase 1), enabling on-land infrastructure (Phase 2), as well as the BSSC Project itself (Phase 3). Phase 1 would enhance the technical, commercial, institutional, social, and environmental framework of the BSSC Project through preparatory studies, capacity building, and technical assistance (TA), including the establishment of adequate institutional mechanisms for intergovernmental coordination and decision-making; Phase 2 would finance on-land transmission grid strengthening in Georgia (and in other countries, if requested by the respective governments) to enable electricity exchanges through the submarine cable system; and Phase 3 would finance, together with other financiers, the eventual construction of the submarine cable system (the BSSC Project itself) if it goes ahead.
- 3. The proposed MPA framework would provide structure and consistency to the World Bank's support to the Government of Georgia and the BSSC Project, which standalone Investment Project Financing (IPF) operations would not be able to provide. The Bank's involvement through an MPA would provide systematic, multiyear support to help improve the quality of preparation of the BSSC Project, facilitate its implementation, and increase its likelihood of success, by offering a line of sight from the preparation activities financed under Phase 1 to the final outcomes of the BSSC Project. Each phase would represent a decision point for the World Bank, in sync with the decision-making by the client. The MPA will also provide a framework for structuring and mobilizing financing from public and private sources for the BSSC Project.
- 4. By approving the ESPIRE MPA Program and its Phase 1, the Board would approve a US\$500 million financing envelope for Georgia, including a US\$35 million IBRD loan for Phase 1. Phases 2 and 3 are expected to be rated substantial or high under the World Bank's Environmental and Social Framework (ESF) and would therefore require World Bank Board approval. In the event that other countries express interest in IBRD financing to participate in the BSSC Project, an additional financing to the MPA would be submitted to the Board (i.e., this IBRD financing would be additional to the MPA envelope approved for Georgia).
- 5. The MPA Program is aligned with the World Bank Group's Evolution Roadmap vision and the One World Bank Group approach. The Program will contribute to two of the Global Challenges Programs (GCPs) under the Evolution Roadmap (Energy Transition, Efficiency and Access and Accelerating Digitalization), including by crowding in public and private financing, fostering partnerships, and supporting learning opportunities related to the RE, energy efficiency, and digitalization agendas. The World Bank, the International Finance Corporation (IFC), and the Multilateral Investment Guarantee Agency (MIGA) have been providing joint support to private sector-led RE development in the South Caucasus, by offering technical assistance for the development and implementation of sector reforms and financing for privately funded RE capacity. In the context of the BSSC Project, the World Bank and IFC have been coordinating on the feasibility study and, together with MIGA, they will collaborate further on the design of the BSSC Project to maximize the potential for private investment and capital mobilization for the parts of the project that can attract such financing.
- 6. The MPA Program will serve as a platform and transparent framework for mobilizing financing from public and private sources, including through co-financing of the MPA Phase 1. Potential commercial financing for the BSSC Project

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in the form of commercial debt taken on by participating state-owned firms and equity investment by private sponsors is estimated to be at least US\$500 million (counted as private capital mobilized [PCM] by the MPA). In particular, the financing for the fiber-optic cable component in the same seabed corridor is expected to attract significant private sector investment. Private capital investment in RE by countries in the South Caucasus participating in the BSSC Project, which would come with substantial local job creation potential, is conservatively estimated to be at least US\$1 billion (counted as private capital enabled [PCE] by the MPA at the Program-level)¹. The European Union (EU) is a strong champion of, and an important stakeholder in the BSSC Project. As part of its commitment to Georgia and the Program as a whole, the EU is allocating (pending approval) grant financing for Phase 1 and expressly requested these resources be channeled through the World Bank, which is expected to be in the form of a trust fund under an Administration Agreement with the EU. Phase 1 is also benefiting from a US\$400,000 World Bank-executed grant from the Government of Japan through the Quality Infrastructure Investment (QII) Partnership.

- A. Regional Power and Digital Sector Context
- (i) Power Sector Context in the Countries Involved in the BSSC Project
- 7. Countries on the two sides of the Black Sea have significantly different electricity generation profiles, with potential for synergies and trade to enhance system reliability, lower costs, and accelerate the energy transition. Hydropower represents the majority of Georgia's power sector mix (74 percent of total generation in 2020), while Azerbaijan produces almost all electricity from natural gas and Armenia has a more balanced mix (40 percent natural gas, 35 percent nuclear, and 23 percent hydro). In contrast, a substantial share of baseload in Southeast Europe is from coal (33 percent in Bulgaria, 17 percent in Romania, and 9 percent in Hungary). Gas also represents a substantial share of generation (6 percent in Bulgaria, 17 percent in Romania, and 27 percent in Hungary). The European Commission's REPowerEU plan (launched in March 2022) aims to wean Europe off fossil fuels well before 2030, accelerate the clean energy transition, and secure alternate sources of energy imports.
- 8. Countries in the South Caucasus have ambitious plans for the development and export of RE generation, while countries in Southeast Europe have committed to phasing out coal generation and are interested in seeking alternative sources of electricity. Georgia's target is to develop 1,500 MW of medium and small hydro, wind, and solar through a three-year auction scheme launched in 2022 (compared with a currently installed capacity of 4,600 MW), in addition to existing RE projects of about 1,400 MW currently under development and the plan to build large hydropower projects with a total capacity of more than 1,400 MW. Armenia set the target to achieve 1,000 MW of utility-scale solar photovoltaic (PV) capacity by 2030 (compared with a currently installed capacity of 3,900 MW), while Azerbaijan aims to expand RE to 30 percent of its total generation by 2030, especially by tapping into the country's huge offshore wind potential. The projected generation capacity mix for 2040 for the South Caucasus countries is shown in Figure 1. By realizing these ambitious plans and building the BSSC Project, the South Caucasus countries would have an excess of RE generation (beyond their domestic needs) that they could export to the EU. At the same time, countries in Southeast Europe have committed to phasing out coal generation, working toward net-zero emissions by 2050 in line with the rest of the EU. Hungary is planning on closing its last coal plant (Matra, 884 MW) by 2027. In its revised draft National Energy and Climate Plan (NECP), published in November 2023, Romania reconfirmed its target to phase out coal by 2032. Bulgaria has committed to decommissioning its coal plants by 2038.

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¹ The PCE is expected in Phase 3.

² Source: IEA.

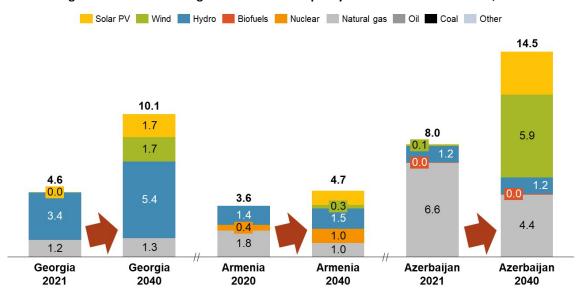


Figure 1. Current and Targeted Generation Capacity Mix in the South Caucasus, MW

Source: Inputs provided by the countries for the base case scenario of the feasibility study of the BSSC Project (except for the 2021 value for Georgia, where the source is the draft National Energy and Climate Plan).

9. The World Bank, IFC, and MIGA have been providing joint support to private sector-led RE development in the South Caucasus. In Georgia, the World Bank (in coordination with IFC) has advised the Government on a new auction-based RE support scheme and is now providing advisory support for its implementation and the development of other sector reforms. Since 2011, IFC and MIGA have provided more than US\$250 million in financing for RE in Georgia. In Armenia, the World Bank has been supporting the Government in improving the financial viability of the power sector and de-risking investments. Since 2015, IFC has provided about US\$190 million in financing for RE in Armenia, including for the first utility-scale solar PV project (Masrik-1) that is under construction. In Azerbaijan, a World Bank Group-wide engagement supported an offshore wind resource assessment and the development of an offshore wind road map that was completed in 2022. The next phase of the engagement is under discussion with the Government, which includes World Bank support for building the enabling infrastructure for offshore wind energy use developed by the private sector.

(ii) Digital Connectivity in the South Caucasus

- 10. International digital connectivity between the South Caucasus and Europe is currently mainly provided by a single 10-year-old submarine cable across the Black Sea, which highlights the need for redundancy. The existing submarine cable is the South Caucasus region's only direct access to Europe, making it vulnerable to being cut off from direct international connectivity in case of a failure. While terrestrial alternatives exist (via Türkiye and Russia), these are indirect and based on bilateral commercial agreements between specific operators and do not serve as a dedicated international connectivity gateway for all internet service providers (ISPs) to access. The need for redundant direct access to global internet resources across the Black Sea has been highlighted as a key priority by Georgia and the region.
- 11. In addition to addressing the need for redundancy, expanding international digital connectivity would bring several benefits to the South Caucasus countries. Demand for international connectivity in the South Caucasus is growing fast and is projected to increase from about 10 Tbps today to almost 50 Tbps in 2028. Building additional international connectivity infrastructure would help meet the growing demand and boost outcomes in domestic digital connectivity markets in terms of quality of service and prices as the supply of international bandwidth increases. Moreover, the region could serve as a significant transit location for inter-regional traffic between Europe and Asia, particularly once the trans-Caspian submarine infrastructure is developed (expected by 2025), as this route would provide a viable alternative to trans-continental submarine cables connecting East Asia to Europe via the Indian Ocean.

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B. The Black Sea Submarine Cable (BSSC) Project

The World Bank

- The proposed BSSC Project aims to build an electricity and digital fiber-optic interconnection between the South Caucasus and the EU, with landing points in Georgia and Romania. It would include a high-voltage direct current (HVDC) line with an envisaged capacity of up to 1,300 MW along with a separate fiber-optic cable. The interconnection would stretch for an estimated 1,155 km, of which about 1,115 km would be via a submarine cable system at a depth of up to 2,200 m (one of the longest and deepest submarine cable systems in the world) crossing the Exclusive Economic Zones (EEZ) of Georgia, Türkiye, Bulgaria, and Romania. While the BSSC Project would be mainly focused on electricity interconnection, laying a separate fiber-optic cable in the same corridor would enable synergies of routing and project preparation. According to preliminary estimates of the feasibility study, the BSSC Project cost would be in the range of US\$3.1–3.7 billion for a 1,300 MW power cable system and around US\$50–70 million for the fiber-optic cable.
- 13. A pre-feasibility study carried out in February 2021 suggested an operation profile of large net exports from the South Caucasus, predominantly consisting of RE, and economic benefits in all participating countries as a result of the BSSC Project. The pre-feasibility study³ showed positive net economic benefits for the participating countries and the BSSC Project as a whole. A more comprehensive and detailed economic analysis is currently underway as part of the feasibility study. The main driver of the economic benefits from the BSSC Project is the large wholesale electricity price differential between Southeast Europe and the South Caucasus. The RE share of the power flows through the cable to Southeast Europe was estimated to be 68 percent in 2035 and to increase thereafter. It is expected that importing countries would benefit from RE imports that would: (i) help diversify their power mix, (ii) provide better balancing, and (iii) offer potential transit revenue. The pre-feasibility economic analysis confirmed that there is potential for the BSSC Project to bring substantial benefits for both the exporting countries in the South Caucasus and the importing countries in Southeast Europe. The ongoing feasibility study will provide the basis for all countries to determine the economic benefits that underpin the decision to participate in the BSSC Project, with the final benefits determined by the terms of the commercial agreements to be signed between the buyers and sellers.

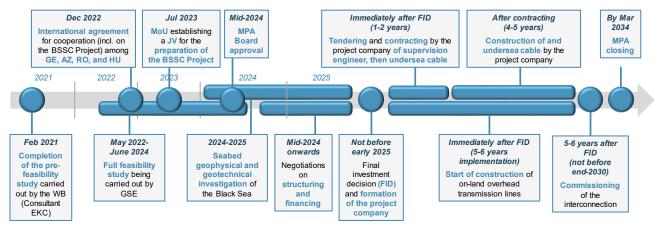


Figure 2. Potential Timeline for the Implementation of the Proposed BSSC Project

Source: World Bank Staff. Note: AZ = Azerbaijan; FID = Final investment decision; GE = Georgia; HU = Hungary; JV = Joint venture; MoU = Memorandum of Understanding; RO = Romania.

14. Based on the encouraging results of the pre-feasibility study, the Government of Georgia asked the World Bank to finance a full feasibility study under the ongoing Energy Supply Reliability and Financial Recovery (P169117) Project

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³ The study carried out an economic assessment of the submarine power and digital interconnections. The power sector analysis included a wholesale market analysis based on the Antares tool (with a plant-level representation of the sector in the South Caucasus and Romania and spot markets for neighboring systems), while the revenues from the fiber-optic cable were estimated based on assumptions on the increased share of digital traffic flowing through this route.



(ESRFRP). The scope of the feasibility study, which began in May 2022, includes the preparation of the following: (a) power system studies and estimation of optimal interconnection capacity; (b) technical design and project definition; (c) economic and financial analysis; (d) commercial framework and operational business model; (e) financing strategy and options; and (f) implementation plan, procurement strategy, and bidding documents.

- 15. As expected for large, regional energy projects, in addition to the overarching feasibility study, a few highly specialized assessments need to be carried out as part of the feasibility study process, most importantly the geophysical and geotechnical investigations of the Black Sea seabed. These studies are expected to be completed while the BSSC Project sponsors will be carrying out negotiations on project agreements for the BSSC Project. A final investment decision (FID) is not expected before early 2025 at the earliest, with commissioning not before end-2030. Approval of financing by shareholders, lenders, and the EU may come in phases after the FID, given the size of the BSSC Project. An indicative timeline for the implementation of the proposed BSSC Project is shown in Figure 2.
- The EU has taken a keen interest in the BSSC Project, and an agreement that expresses the intent to cooperate 16. on the BSSC Project was signed among Georgia, Azerbaijan, Romania, and Hungary. The first intergovernmental meeting was held in May 2022, with delegations from Georgia, Azerbaijan, Romania, and the World Bank (as an observer). In parallel, Georgia kicked off bilateral exchanges with Armenia, which also showed interest in the project and committed to providing inputs to the ongoing feasibility study. In December 2022, an international agreement on the Strategic Partnership in the Field of Green Energy Development and Transmission (with the BSSC Project as one of the priority initiatives for cooperation) was signed by the Governments of Georgia, Azerbaijan, Romania, and Hungary, with the European Commission President also attending as an observer. The agreement established intergovernmental institutions to advance common projects such as the BSSC Project in the form of a Steering Committee and a Technical Working Group. In July 2023, the Governments of the four countries signed an MoU on the future establishment of a joint venture (JV) among representative companies of the countries for the preparation of the BSSC Project. ⁴ The feasibility study will inform the legal framework for the implementation of the BSSC Project and a JV or special purpose vehicle is amongst the options considered. At this time, it is not clear what exact role this JV will play in the development process, but it is expected at a minimum to drive the coordination and preparation process amongst the stakeholders involved up to (and possibly including) the FID stage. Depending on the future negotiations between parties to the BSSC, the implementation model may evolve to include a different shareholding structure depending on BSSC Project requirements as well as infrastructure development and financing considerations. The EU announced that the BSSC Project would be one of the flagship initiatives that could receive financing as part of a US\$17.9 billion (€17 billion) Economic and Investment Plan for the Eastern Partnership Countries, though the modality and amount of EU financing participation are to be determined.
- 17. The Government of Georgia is establishing an Interministerial Working Group (IWG) for the BSSC Project to facilitate project implementation from the government side, as well as relations with the other countries involved and international partners. Given the high level of complexity of the BSSC Project, the IWG will play a key role in enhancing governance, decision-making, and accountability for its preparation and implementation, including technical, legal, operational, commercial, and diplomatic issues. The IWG will be the main vehicle for Georgia to coordinate its inputs to the intergovernmental institutions created for the BSSC Project (see above), which are expected to be the decision-making bodies for the BSSC Project in these areas and nominate participants to join meetings at the international level. The main functions of the IWG would include (a) governance, policy, and security advisory; (b) strategic communication; and (c) facilitation of technical and legal coordination.

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⁴ This JV is expected to be a pre-investment vehicle. The formal project company may be created only when an FID is made, in a form to be agreed upon among the project sponsors.



C. Country, Sectoral, and Institutional Context of Georgia (Borrower for Phase 1)

(i) Country Context

- 18. Georgia has sustained a robust growth performance over the past decade, with double-digit growth since 2021. With an average economic growth rate of 5.2 percent in per capita terms during 2010–2019, Georgia was the second-fastest growing economy in the Europe and Central Asia region and among the fastest globally. As the COVID-19 pandemic hit, Georgia experienced one of the largest GDP drops in ECA (-6.3 percent). However, in 2021 and 2022 the economy rebounded strongly (10.6 percent and 11.0 percent respectively), supported by large money transfer inflows. Growth remained robust in 2023 (7.5 percent), supported by a recovery in domestic consumption and strong tourism performance. Unemployment has continued to fall, reaching 16.4 percent in 2023, below pre-pandemic levels of 17.6 percent in 2019. With the easing of global commodity prices, inflation declined sharply in 2023. Growth is expected to ease in 2024, given tight monetary policy, a slowdown in trading partners, and heightened geopolitical risks.
- 19. Georgia is also exposed to the impacts of climate change and needs to step up adaptation and mitigation efforts. While precipitation levels are expected to decrease on average in Georgia, the risk of flash floods and landslides (like the ones that hit the Shovi Valley in August 2023) will become more severe due to the increased intensity of rainfall. Projected temperature increases and changes in precipitation patterns will affect Georgia's agriculture, forestry, and water sectors, potentially hindering economic growth and highlighting the need for adaptation policies. On the climate change mitigation side, Georgia's updated Nationally Determined Contribution (NDC) sets the ambitious target of a 35 percent reduction in greenhouse gas (GHG) emissions by 2030 from the 1990 level. Achieving this target will require implementing strong monitoring systems and mobilizing significant resources to decouple emissions from economic growth.

(ii) Power Sector and Institutional Context

- 20. Georgia has a hydro-dominated power system but has started taking action to diversify RE development, improve energy security, and accelerate the energy transition. About 80 percent of the total electricity generation in Georgia comes from hydropower plants, which allows the country to export sizeable amounts of electricity in the summer. During the winter, on the other hand, thermal generation and imports make up for the lower hydropower output. Over the past decade, electricity demand has been growing strongly (about 4 percent per year on average) due to the robust economic growth, but demand growth has been at least partially met by increasing imports, as generation capacity (especially non-hydro RE generation) has not kept pace with demand. However, the Government has recently laid out an ambitious plan to become independent from energy imports and further expand RE exports (see above) and has adopted reforms to support private sector participation in RE development (see below).
- 21. In 2017, by becoming a Contracting Party to the Energy Community Treaty, Georgia committed to transposing EU energy directives into national law and has since then made progress toward implementation of the energy acquis communautaire⁵ despite some setbacks. The transmission and generation segments of the electricity sector were unbundled at the end of 2022 (though certification is still pending). The Georgian State Electrosystem (GSE, the state-owned transmission system operator [TSO]) has prepared a new Transmission Network Code, which, among others, permits third-party access and is critical to enabling RE from independent power producers. The chapters related to metering and management of cross-border capacity are still to be completed, and the code is to be resubmitted to the regulator for approval. Georgia is also in the early stages of transposing the 2021 Clean Energy Package, which will contribute to decarbonization on the expected exporting side of the BSSC Project and improve energy security on both sides. For instance, it has already transposed the Risk Preparedness Regulation (Regulation (EU) 2019/941), which is part of the 2021 Clean Energy Package and improves collaboration between countries with the aim to prevent, prepare for, and manage electricity crises. Several of the reforms required for the transposition are supported by the Green and Resilient Georgia Development Policy Operation Series (P177797 and P179972).

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⁵ The core Acquis Communautaire (electricity, gas, oil, RE, energy efficiency, environment, climate, and so on) presently in force is available on the Energy Community website: https://www.energy-community.org/legal/acquis.html.



- 22. Georgia is currently not interconnected with any other Energy Community Contracting Parties or EU Member States. Therefore, no regional integration at the Energy Community/EU level is taking place at present, and a waiver from cross-border cooperation rules applies. There is currently no coordinated capacity allocation of cross-border capacities with neighboring countries at this stage, except for bilateral cross-border capacity allocation on the interconnectors with Türkiye. Nevertheless, rules for the management of cross-border electricity flows and capacity allocation were drafted as part of the transmission grid code. Agreements with neighboring TSOs and the development of the framework for market-based mechanisms for cross-border exchange are still to be signed. Georgia has not transposed the Trans-European Networks for Energy Regulation. The regulatory agency (the Georgian National Energy and Water Supply Regulatory Commission, GNERC) adopted the Rule for Appraisal of Investments in the Electricity and Natural Gas Sectors, while it is still to publish the methodology and criteria used to evaluate investments in electricity and gas infrastructure projects, primarily related to the Projects of Mutual Interest (PMI).
- 23. In 2020, the Government adopted the concept of a new wholesale electricity market, with the launch of the balancing and ancillary service markets, as well as day-ahead and intra-day markets planned for July 1, 2024, after some delays. In May 2022, the Georgian Energy Exchange was granted a license from GNERC to operate the day-ahead and intraday markets, and GSE was licensed to operate the balancing and ancillary services markets. A dry run of the day-ahead and intraday markets is ongoing. GNERC approved the Rules for the Bilateral Contract Market and revised the Rules for Balancing and Ancillary Services Market in July 2022. Major progress was made with the transposition of the Regulation on Integrity and Transparency of the Wholesale Energy Market.
- 24. In December 2022, the Government adopted a new auction-based RE support scheme to address a five-year slowdown in the country's RE development pipeline. The new scheme uses annual non-site-specific competitive auctions to allocate Government support to RE projects (hydropower, wind, solar, and other REs) up to an annual capacity cap. The Government support will take the form of variable feed-in premiums (also called contracts-for-difference, CfDs), paid by a new fund (established under the Electricity System Commercial Operator) to the project operators on top of the revenue the projects can generate in the competitive wholesale market. The Government launched the first auction for 300 MW of RE in February 2023 and is now in the process of adopting an interim solution to provide a reference price for the CfDs until the opening of the new wholesale market (currently planned for July 1, 2024). This first auction is expected to be followed by two more auctions in 2024–2025.

D. Relevance to Higher Level Objectives

- 25. The ESPIRE MPA Program aims to be a transformative program that acts as a stepping-stone to two of the new GCPs under the World Bank Group's Evolution Roadmap, namely Energy Transition, Efficiency and Access and Accelerating Digitalization. It will contribute to the objectives of Energy Transition, Efficiency and Access GCP of increasing access to affordable, reliable, sustainable, and modern energy by establishing the first direct electricity interconnection between the South Caucasus and Southeast Europe, which will contribute to (a) fostering private sector-led RE investments and enhancing energy security in the South Caucasus, (b) accelerating power sector decarbonization in both regions, (c) improving overall power system efficiency, and (d) allowing for a more secure and efficient power system operation by enabling reserve sharing and taking advantage of resource complementarity and seasonality. The fiber-optic submarine cable will increase digital interconnection capacity between the two regions, thus contributing to the objectives of the Accelerating Digitalization GCP of scaling up affordable broadband and supporting digitalization. The program aims to achieve these goals by crowding in public and private sector solutions and financing and fostering broad partnerships and knowledge exchanges to achieve impact at scale, in line with the aspirations of the GCPs.
- The Program is consistent with the Georgia Country Partnership Framework (CPF) for FY19-22 (Report No. 121853-GE discussed at the Board on May 22, 2018)⁶ and would support the country in achieving the targets under its

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⁶ The CPF was extended to FY23 through a Performance and Learning Review (PLR, Report No. 166148-GE, discussed on May 13, 2022).



updated NDC (35 percent reduction in GHG emissions by 2030 compared to the 1990 levels). It would support the achievement of Objective 1.2 (Improved Connectivity and Integration) under Focus Area 1 (Enhance Inclusive Growth and Competitiveness) of the CPF, by enhancing GSE's and Georgia's technical readiness for the potential implementation of the BSSC Project, which would improve the reliability of supply to domestic users and increase power trade. At the same time, by enhancing Georgia's technical readiness for the BSSC Project, it is expected to further accelerate private sector-led RE development in the country and support the decarbonization of the energy sector in line with the country's updated NDC targets. The project is also consistent with the new CPF covering FY25-29 which is expected to be approved by July 2024. The Program is also aligned with the Government's recently published strategic document "Vision 2030. Development Strategy of Georgia" (which includes the submarine power and digital interconnections across the Black Sea among the Government's priorities), as well as with the country's Long-Term Low Emission Development Strategy 2050 (Lt-LEDS), which was officially adopted in April 2023.

E. Multiphase Programmatic Approach

(i) Rationale for Using an MPA

- (a) The MPA framework provides structure and consistency to the World Bank's support to the Government and can help facilitate the implementation of the BSSC Project, by providing a line of sight from the preparation activities financed under Phase 1 to the final outcomes of the BSSC Project, i.e., the construction and commissioning of the submarine interconnection.
- (b) The BSSC is a large and complex infrastructure project with multiple investments with different starting points over a timeline that may take up to a decade spanning different countries. The phased timing of the financing approvals by the World Bank and other international financial institutions (IFIs) for the different steps in the BSSC Project would be fully synced with those on the Governments' side, while still providing a coherent framework for results and a clear, attributable link between the financed activities and the outcomes, which individual IPFs supporting different parts of the BSSC Project could not have. Because it is synced with the decision-making on the Governments' side, the MPA also allows Georgia to manage the risks related to factors outside of its control (notably decision-making by other countries involved in the BSSC Project), giving it the flexibility to move forward or not with individual steps in the MPA Program. Each phase of the MPA represents a concrete decision-point but, as with any IBRD loan, Georgia also has the flexibility to request cancellation of (part of) each phase's financing during implementation without incurring financial penalties.
- (c) The MPA provides a structure for engaging with and supporting coordination across stakeholder countries on either side of the BSSC Project as well as financing partners and a framework for the World Bank to support them during Phases 2 and 3.
- (d) The ESPIRE MPA Program framework provides a platform for fundraising for the Government of Georgia and partnerships between the World Bank and other financiers.
- (e) The MPA allows for the integration of findings and lessons from one phase into the next and for complementary TA components to be adjusted based on lessons learned during prior phases.

(ii) Program Results Chain

27. The implementation period of the ESPIRE MPA Program will span up to 10 years and envisages three phases. The Theory of Change, presented in Figure 3, illustrates how the program's phases and the financed activities support the Program Development Objective (PrDO) and the higher-level outcomes. Figure 4 lays out the sequencing in more detail.

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Figure 3. Theory of Change

Higher-level objectives

Enhanced energy security and renewable energy development in the South Caucasus, accelerated power sector decarbonization in the South Caucasus and Southeast Europe, and improved digital connectivity

PrDO

Improve Georgia's institutional capacity for the development of submarine cable projects, strengthen Georgia's domestic power transmission system, and establish a direct electricity interconnection and increase direct digital connectivity capacity between the South Caucasus and Southeast Europe.

Intermediate Outcomes

- Viable corridor for the submarine cable system identified
- Georgia's institutional capacity strengthened
- Georgia's domestic transmission network strengthened and ability to absorb renewable energy increased
- Direct power trade and digital interconnection between the South Caucasus and Southeast Europe enabled

Outputs

Geophysical and geotechnical investigations of the seabed, project structuring and negotiations, and preparatory studies for on-land transmission grid strengthening carried out

On-land overhead transmission lines constructed

Black Sea undersea power and digital interconnection constructed and commissioned

Activities

Preparatory activities including technical assistance and capacity building (Phase 1) On-land transmission grid strengthening (Phase 2) Undersea cable system and converter station financing (Phase 3)

Development Challenges

- · Georgia lacks institutional capacity to develop submarine cable projects
- Georgia's domestic transmission network needs to be strengthened
- Potential for electricity trade between the South Caucasus and Southeast Europe to support energy security and renewable energy development, reduce electricity costs, and accelerate decarbonization remains untapped due to the lack of a direct electricity interconnection
- · Growing demand for digital connectivity across the Black Sea cannot be fully met by the existing infrastructure

(iii) PrDO with Key PrDO Indicators and Baselines and End Targets

- 28. The PrDO is to improve Georgia's institutional capacity for the development of submarine cable projects, strengthen Georgia's domestic power transmission system, and establish a direct electricity interconnection and increase direct digital connectivity capacity between the South Caucasus and Southeast Europe. The PrDO indicators with their respective baselines and end targets⁷ are as follows:
 - Intra-governmental institutions with the capacity to coordinate and facilitate green energy projects between the South Caucasus and Southeast Europe have been established and operationalized in Georgia (Yes/No)
 - Georgia's domestic power transmission grid is ready to be interconnected to a submarine power cable (baseline: No, target: Yes)
 - Increased direct electricity interconnection capacity between the South Caucasus and Southeast Europe (baseline: 0, target: 1,300 MW)

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⁷ Target values for PrDO indicators may be updated based on the outcomes of the feasibility study when Phase 2 is prepared.

- Redundant direct submarine international digital connectivity established between the South Caucasus and Southeast Europe⁸ (baseline: No, target: Yes), with a sub-indicator of increased total installed international capacity directly connecting Georgia to Southeast Europe (baseline: 12 Tbps; target: 30 Tbps)
- Net greenhouse gas emissions per year⁹ (baseline: 0, target: -1.5 million tons of CO_{2eg}/year)
- Public financing leveraged by the Program (baseline: 0, target: US\$2,385 million)
- Private capital mobilized (PCM) by the Program¹⁰ (baseline: 0, target: US\$500 million)
- Private capital enabled (PCE) by the Program¹¹ (baseline: 0, target: US\$1,000 million)
- GW of renewable energy capacity enabled 12 (baseline: 0, target: 0.5 GW).

(iv) Program Framework

- 29. The MPA will be structured with partially overlapping phases supporting a known and clearly delineated overall MPA Program scope. This will provide the ability for the phases to adapt to reflect overall progress and timelines, as well as structuring and financing decisions for the BSSC Project. A description of the activities expected in each phase is summarized in Figure 4 and below:
 - (a) Phase 1: Preparatory activities for the BSSC Project including TA and capacity building (US\$35 million IBRD loan). This phase would finance: (i) the Black Sea geophysical and geotechnical seabed studies to identify a corridor for the power and fiber-optic cable system (the technical studies that still need to be carried out as part of the feasibility study process) including the associated supervision services, and (ii) legal and financial advisory, TA, capacity building, and knowledge transfer to support financial negotiations, institutional strengthening, and stakeholder engagement at both the Georgian and intergovernmental levels, and preparatory technical and E&S studies. More details on Phase 1 are provided in Section II (Project Description). The borrower will be Georgia, while the implementing agency will be GSE.
 - The EU is expected to co-finance Phase 1 with grant financing (allocated in line with GSE's financing needs), which will be structured as a recipient-executed trust fund, with the World Bank providing fiduciary oversight.
 - (b) Phase 2: On-land transmission grid strengthening (US\$50 million IBRD loan). The second phase would finance investments required to strengthen the Georgian transmission network to interconnect and transmit power through the BSSC. These investments would include an overhead line (OHL) for transmission connecting the site of the new converter station at the landing point of the BSSC (near Anaklia, on the Black Sea coast) to Georgia's backbone high-voltage transmission network. The expected connection points with Georgia's transmission network would be the Jvari and Tskaltubo substations (see Figure 3.3 in annex 3), but the exact routing of the OHL is still under consideration. Procurement for the construction of the OHL would start early enough to be ready for construction immediately after the FID of the BSSC is taken. The borrower would be Georgia, while the implementing agency would be GSE. Phase 2 would also include a

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⁸ 'Direct submarine international digital connectivity' is defined here as submarine digital infrastructure to provide international Internet Protocol transit capacity, made available to all ISPs on an open, nondiscriminatory access basis.

⁹ This indicator will be measured based on the power mix in Georgia, adjusted for imports from participating South Caucasus countries, at the time of commissioning and conservatively assuming that all replaced dispatchable power on the Southeast European side is gas fired.

¹⁰ PCM will apply mostly to Phase 3, but some private capital could be mobilized also under Phase 2.

¹¹ This indicator measures the PCE for RE projects reaching financial close in the participating South Caucasus countries after the FID of the BSSC Project and before the ICR of the MPA Program, excluding any projects that have a fully domestic off-take agreement. It is expected that PCE will apply only to Phase 3. PCM by the MPA Program is excluded from this indicator.

¹² This indicator measures the installed capacity of RE projects reaching financial close in the participating South Caucasus countries after the FID of the BSSC Project and before the Implementation Completion and Results Report (ICR) of the MPA Program, excluding any projects that have a fully domestic off-take agreement.

comprehensive TA component to support the achievement of the milestones to proceed with Phase 3 as well as, among others, the development of a roadmap for ENTSO-E integration ¹³ and continued support for the cooperation and coordination among the countries involved in the BSSC Project.

In parallel with IBRD financing for Phase 2, additional sources of financing may be needed for transmission grid strengthening across the South Caucasus. More details on these potential needs will be known after the completion of the feasibility study. Should there be interest from other countries, Phase 2 could also finance other enabling transmission grid strengthening investments through additional financing to the MPA (i.e., this IBRD financing would be additional to the MPA envelope approved for Georgia).

Milestones to be achieved to proceed with Phase 2: (i) An FID on the BSSC Project has been taken, and there is a clear road map toward commercial agreements on its structuring, financing, and operation; (ii) effective intergovernmental institutions are in place to execute the BSSC Project; (iii) a road map toward compliance with legal requirements related to the BSSC Project is in place; (iv) a road map towards compliance of participating countries in the South Caucasus with ENTSO-E requirements and EU directives is in place; (v) the proposed OHLs are aligned to the Paris Agreement; and (vi) tender documents and E&S instruments for the OHL(s) have been prepared.

(c) Phase 3 (BSSC Project): Submarine cable system including converter stations (estimated IBRD financing envelope of up to US\$415 million). The current preliminary median cost estimate of the feasibility study for the financing needs for Phase 3 (the submarine cable infrastructure and the two associated converter stations) is US\$3.2 billion (with a range of US\$3.1–3.7 billion for a 1,300 MW power cable system and around US\$50–70 million for the fiber-optic cable). IBRD is estimated to provide US\$415 million, while the remaining US\$2,785 million are expected to be mobilized from public and private sources. While the evaluation of the project structuring and financing options is still ongoing as part of the feasibility study, the Government of Georgia expects a substantial share of public financing to be needed. Substantial leveraging of public and private financing from a range of investors and financiers is expected as part of the overall project structure. Private participation is expected especially for the fiber-optic cable portion but may also be mobilized for the power cable (both commercial borrowing and commercial equity; to be confirmed by market sounding). Phase 3 would provide financing for a share of Georgia's public borrowing for the BSSC, as well as TA. The implementing agency would be the BSSC Project company.

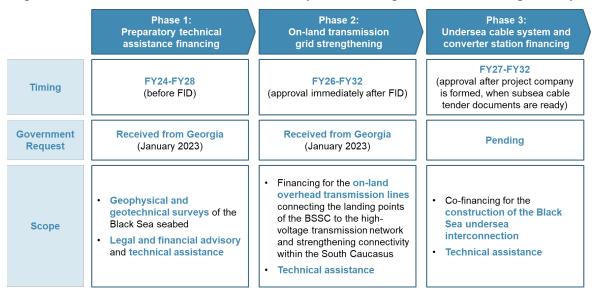
In line with the proposed MPA envelope and the large financing needs, IBRD financing would be designed as a platform and transparent framework for participation by other IFIs for Phase 3, and IBRD's due diligence under the MPA is expected to help mobilize private/commercial financing sources for the BSSC Project. Should there be interest from other countries, Phase 3 could also finance the activities of other countries (for example, Azerbaijan, Armenia, Romania, and Hungary) for the implementation of the BSSC Project through additional financing to the MPA (i.e., this IBRD financing for other countries would be additional to the MPA envelope approved for Georgia).

Milestones to be achieved to proceed with Phase 3: (i) a project company for the BSSC Project has been formed; (ii) tender documents and E&S instruments for the BSSC Project have been prepared; and (iii) the BSSC Project is deemed ready for appraisal of IBRD financing in terms of compliance with legal requirements, status of commercial agreements, and status of co-financing approval.

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¹³ Compliance with the regulations of the European Network of Transmission System Operators for Electricity (ENTSO-E) is expected to be a requirement for the commissioning of the power interconnection.

Figure 4. Visualization of the Three Phases of the Proposed MPA Program, with Their Timing and Scope



30. The program framework and estimated financing mobilization are presented in Table 1. As per the MPA policy, the Board is expected to approve the overall MPA framework and Phase 1. The amounts for Phases 2 and 3 are indicative and will depend on the outcomes of the feasibility study and other technical studies, the government's interest, as well as the availability of funds. Phases 2 and 3 are expected to be rated substantial or high under the ESF and would therefore require Board approval.

Table 1. ESPIRE MPA Program Framework and Estimated Financing Mobilization

| Phase # | Project ID | Phase's Proposed Development Objective | IPF or PforR | Estimated IBRD Amount (US\$, millions) | Estimated Other Amount (US\$, millions) | Estimated Financing Mobilization (US\$, millions) | Estimated Approval Date | Estimated E&S Risk Rating |
|------------|--------------|--|-----------------|--|---|--|-------------------------------|---------------------------------|
| 1 | P179950 | Enhance the implementation readiness of the Black Sea Submarine Cable Project. | IPF | 35 | 014 | 0 | May 2024 | MPA: High Phase 1: High |
| 2 | tbc | Improve the readiness of the transmission networks of the South Caucasus countries to trade renewable electricity with Southeast Europe. | IPF | 50 ¹⁵ | 0 | 100 (public) | March 2026 | Substantial |
| 3 | tbc | Increase direct electricity interconnection, electricity exchanges, and digital connectivity capacity between the South Caucasus and Southeast Europe. | IPF | 415 | 0 | 2,785 ¹⁶ (including 2,285 public and 500 PCM) | March 2027 | High |
| MPA Pr | ogram Finar | ncing Envelope | | 50 | 00 | | | |
| Total Es | stimated Fin | ancing Mobilization | | | | 2,885 | | |
| Total | | | | | 3,385 | | | |

Note: PforR = Program-for-Results.

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¹⁴ Grant financing from the EU is currently under discussion with the Government of Georgia.

¹⁵ Indicative amount based on the government request, which may increase depending on further grid analysis.

¹⁶ The estimated financing mobilization for Phase 3 includes an estimated US\$2,285 million from governments and IFIs, US\$400 million of commercial financing, and US\$100 million of private investment, assuming a total project cost of US\$3,200 million.



(v) Learning Agenda

- 31. The key knowledge gaps to be filled for a successful implementation of the BSSC Project relate to the completion of the technical and E&S studies to ensure efficient execution of the infrastructure. The main technical source of risks associated with the submarine cable system is the fact that the seabed slopes on each side of the planned route are very steep, descending from approximately 100 to 2,200 m in a very short distance (see Figure 3.1 in annex 3). While seabed conditions are expected to be significantly easier for cable routing and installation across the 'flat' deep area, the slopes are characterized by canyons that could be prone to slides, mass waste processes, and turbidity currents that may be hazardous to installed cables. The desktop geological study suggested that this risk is relatively low and that the BSSC Project is technically feasible, but the geophysical and geotechnical investigations of the seabed will be crucial to identify the best routing for the cable system.
- 32. On the institutional side, key knowledge gaps relate to the institutional setup for the execution of such a large, complex international infrastructure project, as well as the policy and regulatory frameworks on the South Caucasus side to ensure optimal utilization of the BSSC Project and achievement of the expected higher-level outcomes. The financing structure of the BSSC Project will need to be agreed upon by the countries involved and effective institutions will have to be put in place to ensure the Project is executed effectively and efficiently. At the same time, the South Caucasus countries will have to strengthen policy and regulatory frameworks to ensure alignment with the EU electricity market rules, enable trade through the BSSC interconnection, and support private sector-led RE development.
- 33. With its adaptive structure, the MPA will incorporate lessons learned during the earlier phases in the design of the subsequent phases. Phase 1 will finance preparatory TA activities that will inform the technical, E&S, and financial design of the BSSC Project. The investigations of the Black Sea seabed and the E&S assessments will allow the identification of an optimal route for the submarine cable system, which will be a crucial element for the design of Phase 3. Similarly, the achievement of a final decision on the financing structure of the project (supported by TA under Phase 1) will be a crucial milestone for the launch of Phase 3. At the same time, the development of the E&S assessments and the technical studies for the connection of the BSSC to Georgia's high-voltage transmission network will inform the design and implementation of Phase 2.

II. PROJECT DESCRIPTION

A. Project Development Objective

(i) PDO Statement

Enhance the implementation readiness of the Black Sea Submarine Cable (BSSC) Project.

- (ii) PDO Level Indicators
- 34. The Project Development Objective (PDO) level outcome indicators of Phase 1 include the following:
 - A geophysically and geotechnically viable corridor for a submarine cable system (power and digital) between the South Caucasus and Southeast Europe across the Black Sea has been identified (Yes/No).
 - Intra-governmental institutions with the capacity to coordinate and facilitate green energy projects between the South Caucasus and Southeast Europe have been established and operationalized in Georgia (Yes/No).
 - The technical, environmental, and social documentation of the BSSC Project and the OHLs in Georgia and Romania is ready for implementation (Yes/No).
 - A roadmap for alignment of the Georgian power sector with EU and ENTSO-E regulations has been adopted
 and is under implementation, with the wholesale market opening and unbundling reforms completed
 (Yes/No).

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B. Project Components of Phase 1

- (i) Component 1: Black Sea seabed surveys (EUR 27,771,000, US\$30,000,000 equivalent)
- 35. This component would finance (a) the surveys of the Black Sea seabed (seabed surveys), (b) the supervision of the two studies, and (c) capacity building and knowledge transfer to support GSE and the Government of Georgia in designing, procuring, and executing them. The seabed survey corridor is based on the geological investigation, which is part of the scope of the ongoing feasibility study and recommended a corridor for the interconnector routing based on all applicable guidelines and laws, available knowledge of the geological and geotechnical aspects of the Black Sea, existing subsea infrastructure, fishing locations, shipping routes, environmental aspects, and other constraints that may affect the installation and maintenance of the interconnector. The seabed surveys consist of geotechnical and geophysical investigations of the seabed corridor and an unexploded ordnance (UXO) survey. Besides financing the investigations, this component will finance the supervision contract for the two studies and will offer GSE and the Government capacity building for the definition of the technical design of the studies, their procurement process, and their implementation.
- (ii) Component 2: Legal and financial advisory and technical assistance (EUR 4,629,000, US\$5,000,000 equivalent)
- 36. This component would finance advisory and TA activities to support the preparation of the BSSC Project:
 - Institutional, legal, and financial advisory. This activity would provide advisory to the Government of Georgia with institutional, legal, regulatory, and financial advisory services to the Project Implementing Entity for the preparation and implementation of the BSSC Project, including, among others, capacity building for the establishment and operationalization of the IWG and legal and financial advice on the most relevant tasks needed for the successful preparation and implementation of the BSSC Project, including the structuring of the project transaction and related market sounding, alignment with ENTSO-E requirements and relevant EU and national regulations, ¹⁷ obligations under the United Nations Convention on the Law of the Sea (UNCLOS) and the Bucharest Convention, ¹⁸ and RE and wholesale market development.
 - Preparatory technical studies for the on-land OHLs connecting the BSSC to Georgia's domestic high-voltage grid. The scope of the ongoing feasibility study includes a high-level study of the on-land OHLs but no detailed routing and design, so this component would finance additional technical work and related capacity building and knowledge transfer to support the preparation of the bidding documents of the OHLs.
 - E&S instruments for the BSSC Project and the on-land OHLs in Georgia and Romania. 19 This will include the development of studies not prepared before submission of the MPA Phase 1 to the World Bank's Board of Directors, namely the Resettlement Policy Framework (RPF), site-specific Resettlement Action Plans (RAPs), and the Environmental and Social Impact Assessment (ESIA) of the on-land OHLs in both countries and the submarine cable system. This activity will also provide capacity building and knowledge transfer to GSE and the Government to support the development of the E&S instruments.
 - Stakeholder engagement and communication support. This activity would finance citizen engagement and
 communication campaigns related to the preparation and implementation of the BSSC Project. In addition,
 this activity would provide capacity building and help the Government of Georgia coordinate discussions with

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¹⁷ The support for alignment with ENTSO-E requirements and EU directives under Phase 1 will focus on Georgia as the borrower. The other South Caucasus countries will be supported through the World Bank's regular engagement with those countries.

¹⁸ Under the UNCLOS, during preparation, it will have to be confirmed whether Bulgaria and Türkiye have national legislation that imposes any measures for the exploration of their continental shelf and the exploitation of their natural resources, to assess whether there are any obligations toward the coastal states in relation to exploring continental shelf for laying submarine cables. With respect to the Bucharest Convention, according to Article 15 (5), the results of the assessments of the likely impact of the cable should be made available to the Black Sea Commission before commencing with the cable laying.

¹⁹ The on-land OHL on the Romanian side is not expected to be financed by IBRD. However, it would still be part of the ESIA covering the whole BSSC Project infrastructure and would be considered an associated facility subject to the World Bank's ESF.



- the other countries involved in the BSSC Project, as well as international partners and other stakeholders (for example, the EU, other IFIs, technical consultants, and private companies).
- **Security study.** This activity would finance just-in-time security risk assessments to provide up-to-date information on security risks and support the preparation and implementation of the BSSC Project.
- 37. Leveraging the platform offered by the MPA, additional funds are being mobilized to co-finance Phase 1. The EU is expected to support both components of Phase 1 and also support Georgia's contribution to the establishment of the project company (e.g., the set-up of the company's premises in Georgia), through grant financing that will be structured as a trust fund. Parallel World Bank-executed TA co-financed by a US\$400,000 grant from the QII Partnership (supported by the Government of Japan) will support the regulatory readiness of other South Caucasus countries, which are not borrowers of Phase 1. In addition, the World Bank has mobilized funds for TA focused on the design and implementation of submarine fiber-optic cable systems and their business and financing models.

C. Project Beneficiaries

38. The beneficiaries of the BSSC Project supported by the ESPIRE MPA Program include electricity generators and consumers, as well as digital providers and internet users across all the countries in the South Caucasus and Southeast Europe. Electricity generators will benefit from the expanded power trade opportunities, while consumers will have access to more reliable and sustainable electricity supply. The BSSC Project will also contribute to improving the financial bottom line of GSE and the other TSOs involved and stimulating private sector investments in RE generation (especially in the South Caucasus), with the related benefits for the broader economy in terms of employment. At the same time, new revenue streams will open for ISPs owing to the strengthened connectivity between the South Caucasus and Europe, while internet users will benefit from improved bandwidth, reduced internet connection costs, and a more reliable connection. The direct beneficiaries of Phase 1 of the MPA will be Georgia and the other countries that are participating in some capacity in the BSSC Project, as the preparatory TA financed under Phase 1 will enhance implementation readiness.

D. Rationale for Bank Involvement and Role of Partners

- 39. The World Bank's involvement through the MPA Program aims to leverage the World Bank Group's convening power to support country and development partners coordination, serve as a platform and transparent framework for mobilizing financing from public and private sources, and help improve the quality of preparation of the BSSC Project, thereby increasing its likelihood of success. The World Bank has been leading the strategic engagement related to the BSSC Project in the South Caucasus and has facilitated briefings and engagement with development partners, IFIs, and the diplomatic community. Through its continued and systematic involvement under the MPA framework, the World Bank can help improve the quality of the BSSC Project, reduce its risk, nurture confidence in the transparency and fairness of its design, and facilitate private sector involvement. This would be achieved through mobilizing technical expertise and hands-on experience in project execution to help the countries identify challenges and navigate those collectively to reach the objectives of the BSSC Project. In doing so, the World Bank will draw on its experience supporting submarine cables such as the Tunisia-Italy interconnection project and other regional interconnection projects (for example, CASA-1000).
- 40. The engagement with Georgia under the MPA builds on the long-standing financing partnership with GSE. The World Bank operations financing transmission infrastructure in Georgia include the recently closed Transmission Grid Strengthening Project (TGSP, P147348) and the ongoing ESRFRP. The ESPIRE MPA Program will draw on the experience and lessons learned from these projects, including the importance of institutional strengthening for the sustainability of the investments. Despite significant progress, there is room for GSE to further strengthen its capacity in the preparation and implementation of large power transmission projects, including project management, technical, fiduciary, environmental, and social aspects.
- 41. The BSSC Project provides an opportunity for the involvement of IFC and MIGA alongside the World Bank, in line with the One World Bank Group approach. The World Bank and IFC have been coordinating on the feasibility study

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of the BSSC Project and, together with MIGA, will collaborate further on the design of the Project to maximize the potential for private investment and capital mobilization for the parts that can attract such financing (mostly expected to be on the fiber optic cable). In this context, the work that the World Bank and IFC have been carrying out jointly since 2021 to advise GSE on mobilizing commercial finance for its transmission investment program can serve as a blueprint for mobilizing private capital for the BSSC Project. With the World Bank's and IFC's support, GSE is preparing for a first commercial financing transaction, which is currently planned for the first half of 2024.

E. Lessons Learned

42. The MPA Program and its Phase 1 reflect lessons learned from comparable World Bank-financed interconnection projects, as well as other infrastructure projects financed by the World Bank in the region. The main lessons learned and the way they were reflected in the program design are summarized in Table 2.

Table 2. Lesson Learned

| Lessons Learned | How They Were Reflected in Program Design | | |
|---|--|--|--|
| Institutional arrangements for project implementation. Sound institutional arrangements, together with a strong sense of commitment and ownership, need to be established at the onset. | Phase 1 of the MPA will finance advisory activities on governance and institutional strengthening for the Government of Georgia and the coordination with the other countries involved. | | |
| commercial and regulatory arrangements is vital to maximize the | Phase 1 and Phase 2 of the MPA will finance legal and financial advisory activities to support the development of wholesale electricity markets in the South Caucasus and their harmonization with the EU market, including alignment with ENTSO-E requirements and relevant EU regulations. | | |
| proven to be a reliable technology for the transmission of large quantities of electric energy over long distances with relatively low | distances. HVDC Voltage Source Converter (VSC) technology will allow flexible power system operations with uninterrupted bidirectional power flows and | | |
| Synchronized implementation of the submarine cable system and on-land OHLs. The transnational and domestic transmission lines should be implemented in parallel and in close coordination to avoid delays in the completion of the overall infrastructure. | , | | |

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

Phase 1 of the ESPIRE MPA Program will be implemented by GSE, while the Ministry of Economy and Sustainable Development (MoESD) will facilitate and support implementation. GSE has gained significant experience implementing transmission grid construction and rehabilitation projects supported by various development partners (including the World Bank) and has become familiar with the World Bank's fiduciary and E&S policies and procedures. GSE's International Projects and Reporting Department (IPRD) will be the responsible project implementation unit for the IBRD loan and will involve other units and departments within GSE, most importantly the Intersystem Agreements and International Interconnection Department, which is leading the preparation of the BSSC Project. Other involved departments include the International Project Planning and Technical Supervision Department; the Environmental, Social Affairs, and Permits Department; the Accounting and Financial Department; the Public Relations Department; and the Legal Department. The MoESD will facilitate and support project implementation as needed in its capacity as the line Ministry responsible for overseeing energy policy in Georgia.

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B. Results Monitoring and Evaluation Arrangements

44. Phase 1 implementation and progress toward the PrDO will be monitored by GSE's IPRD, while the legal and financial advisory activities under Component 2 will be monitored by GSE's Financial Department, based on established monitoring arrangements and reporting procedures. The IPRD has demonstrated the capacity to monitor investments from a technical and E&S perspective and has gained significant experience monitoring implementation processes and measuring outcomes. The Financial Department is adequately staffed and has the capacity to supervise the implementation of the legal and financial advisory activities under Component 2. Section VII presents the Results Framework for Phase 1 of the Program, which defines the specific indicators to be monitored. In addition, the World Bank will carry out the standard review procedures and carry out regular implementation support missions to review the progress of the implementation of Phase 1 of the program.

C. Sustainability

- 45. The long-term sustainability of the BSSC Project hinges upon the achievement of an agreement among the countries involved that clearly defines the Project's financing and ownership structure. Discussions on the financing and ownership structure are ongoing and are being supported by the World Bank. The final agreement on the BSSC Project's structuring will have to include a clear definition of the mechanisms to transfer ownership from the project company to the relevant entities (if needed) and allocate operating costs and revenues of the interconnector among project sponsors. Phase 1 will support these discussions by financing legal and financial advisory on the BSSC Project transaction.
- In addition to a clear financing and ownership structure, mutually agreed and transparent terms for electricity trading and capacity allocation within a sustainable commercial framework will be crucial to the sustainability of the BSSC Project and will be the subject of TA under the MPA. Various options exist for capacity allocation under ENTSO-E regulations; so, the exact rules and capacity allocation mechanism will have to be prepared and agreed upon by the participating countries. Given that the proposed interconnector is not internal to the EU, capacity auctions could be organized by the relevant ENTSO-E TSO, namely the Romanian Transelectrica. In parallel, some of the capacity could be allocated for the long term separately from the auctions. TA financed under Phase 1 and Phase 2 of the MPA will support coordination among the project sponsors on this topic.

IV. PROJECT APPRAISAL SUMMARY

A. Technical and Economic Analysis

- (i) Technical Analysis
- 47. The BSSC Project would build a power interconnection with a capacity of up to 1,300 MW across the Black Sea between Anaklia in Georgia and Constanta in Romania, to be further expanded in the future if the Project is successful. The Project scope includes (a) two Alternating Current/Direct Current (AC/DC) converter stations (one in Romania and one in Georgia); (b) a bipolar 525 kV HVDC cable system (including two separate power cables) stretching for about 1,155 km, of which about 1,115 km under the sea; and (c) sea/land joint pits to connect the subsea and terrestrial sections of the cable system. Enabling infrastructure includes AC OHLs to connect the AC/DC converter stations to the national grids in Romania and Georgia (routes and lengths to be defined). The preliminary technical design (being finalized as part of the ongoing feasibility study) includes the use of the half-bridge VSC technology, which allows fast power reversal. For the design of the cable insulation system, mass-impregnated (MI) and extruded cross-linked polyethylene (XLPE) insulations are being considered as possible options. Based on a survey of submarine cable manufacturers and installers, the MI technology would allow a maximum capacity of 1,300 MW, while XLPE technology would allow the cable system to reach 1,500 MW. However, considering the current lack of experience globally with the use of XLPE insulation systems at 525 kV and under the demanding requirements imposed by the bathymetry of the Black Sea, it is assumed that the MI

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technology will be used.²⁰ Future expansion of the BSSC Project could take the transmission capacity beyond 1,300 MW through additional pairs of power cables. The draft routing corridor across the Black Sea is shown in Figure 3.2 in annex 3.

- An alternative on-land OHL through Türkiye and Bulgaria was initially considered as an option, but although the 48. overall cost could be lower than the submarine route, it is not considered viable. If the terrestrial route through Türkiye and Bulgaria was integrated with these countries' power systems, the objective of direct trade between the South Caucasus and Southeast Europe would become infeasible, as trade would be subject to various regulatory and commercial regimes and constraints. Similarly, a terrestrial route via an HVDC link that is isolated from these countries' power systems would be a project on Turkish and Bulgarian soil with little to no benefits to these countries, and therefore politically and practically difficult to realize.
- For reasons related to installation and maintenance, the fiber-optic cable would be physically separate from the power cable system (and from the small-capacity communications link for monitoring purposes that would be part of the power cable system itself). The bundling of the fiber-optic and power cables is considered impractical or unfeasible, for several reasons: (a) due to the very high sea depths of the Black Sea, during installation, the fiber-optic cable would be subject to large mechanical forces that could damage it; (b) because of the very long distance to be covered, repeaters would be needed on the fiber-optic cable, and these are significantly larger than the cable itself; (c) there would be a risk of electromagnetic interferences in the fiber-optic cable; and (d) maintenance operations would be significantly more complex and costly. Nevertheless, the fiber-optic cable (estimated to cost around US\$50-70 million) would still benefit from the preparatory work undertaken for the power cable system and could be a no-regret addition to the BSSC Project. Capital expenses would be greatly reduced compared to the deployment of a stand-alone submarine fiber-optic cable, and operations and maintenance costs could be shared between the power and fiber-optic cables.
- The scope of work of the seabed surveys supported by Component 1 was developed by GSE with support from 50. the feasibility study consultants and reviewed by the World Bank. The geophysical investigation involves scanning the seabed to further detail the identified corridor. The survey can be conducted from vessel-mounted equipment for water depths under 50-100 meters but requires remotely operated vehicles or other systems that can operate close to the seabed for higher depths. The survey equipment for this investigation may include (a) a multi-beam echo sounder and a side scan sonar to acquire bathymetry and seabed data; (b) a sub-bottom profiler to remotely sense layers of sediment and rock beneath the seabed; and (c) magnetometers (gradiometer) to detect the presence of ferrous material such as shipwrecks, cables/pipelines, and UXO on the seabed. The geotechnical investigation is performed by specialized vessels that can perform geotechnical tests and collect seabed soil samples within the identified narrow corridor (roughly every 5 km, but with a higher frequency in the slopes) to determine information on specific issues (for example, risk of landslide/turbidity currents). It might involve drilling in some areas, for example, where the cable system needs to be placed under the seafloor (for example, closer to the shore). Additionally, the scope of work includes an UXO survey and specific survey activities for the near-shore and landing point areas.
- 51. Phase 1 of the program aims to enhance the implementation readiness of the BSSC Project, which will require undertaking progress on technical, institutional, legal, and commercial aspects. The BSSC Project can be considered ready for implementation and bankable only once (a) the technical design (including the E&S aspects) is finalized, (b) institutional mechanisms are in place that ensure effective coordination among sponsor countries, (c) legal issues related to the installation of a submarine cable system under the Black Sea and the alignment with ENTSO-E and EU regulations are resolved, and (d) an agreement on the structuring and financing of the Project is reached and an operational project company is in place. Phase 1 of the program will support activities across all these dimensions, by financing the geophysical and geotechnical investigations of the Black Sea seabed under Component 1 and a wide range of TA activities under Component 2. A detailed list of the actions required to achieve the PDO of Phase 1 and enhance the implementation readiness of the BSSC Project (together with a road map toward their completion) is included in Table 2.1 in annex 2.

²⁰ Achieving higher capacities is possible, but it would require laying additional cables in parallel at an adequate buffer distance.

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(ii) **Economic Analysis**

- 52. The BSSC Project would achieve several strategic objectives for the countries involved, primarily in the South Caucasus. In the South Caucasus, the BSSC Project is expected to (a) support private sector-led RE development (primarily hydropower in Georgia, offshore wind in Azerbaijan, and solar PV in Armenia), (b) improve the countries' energy security, and (c) reduce power system costs through trade and lower balancing reserve capacities. Given that strong international internet demand growth is also projected in the South Caucasus, the new digital infrastructure would provide options to consumers and ensure redundancy of direct access to global internet resources for the region. The EU also stands to benefit from the BSSC Project as it aims to accelerate plans for decarbonization through the REPowerEU initiative and the Green New Deal, which aim to diversify Europe's energy supply and support increased investments in RE.
- A pre-feasibility study of the BSSC Project completed in February 2021 showed positive net economic benefits for the participating countries and the region as a whole; a full economic feasibility study is ongoing and, based on preliminary results, the Project is economically viable. The economic analysis under the pre-feasibility study showed that in a base case scenario, the BSSC Project would generate net economic benefits for the three South Caucasus countries and Romania and would have an EIRR ranging between 5.7 and 25 percent, depending on the scenario. Most of the economic benefits (about 80 percent) in the base case would come from an increase in socio-economic welfare stemming from the power cable system, while the rest corresponds to the lower cost of providing broadband digital services in comparison to other alternatives. The main driver of the economic benefits from the power cable system operations is the large wholesale electricity price differential between Southeast Europe and the South Caucasus. The sensitivity analyses carried out as part of the pre-feasibility study concluded that the results were robust to changes in key assumptions (for example, planned capacity commissioning and demand growth in Georgia). Since 2021, when the prefeasibility study was completed, the investment cost estimates for the BSSC Project cost have increased substantially due to global inflationary pressures, a strong global demand for submarine cables, and manufacturing capacity constraints. An updated comprehensive economic analysis of the BSSC Project is being carried out as part of the ongoing feasibility study (expected to be completed by July 2024). Based on preliminary results, the Project remains economically viable.

(iii) **Paris Alignment and Climate Co-Benefits**

- 54. Phase 1 of the ESPIRE MPA Program is aligned with the goals of the Paris Agreement and Georgia's updated NDC, on both mitigation and adaptation. Since Phase 1 only includes financing for preparatory studies and TA (which are 'universally aligned' activities under the World Bank's Paris Alignment methodology), the operation is aligned with the mitigation goals of the Paris Agreement. The program is expected to contribute to accelerating RE development across the South Caucasus (by improving investment conditions to RE developers and supporting the integration of variable RE into the power grids) and supporting the decarbonization of the power sectors in both the South Caucasus and Southeast Europe. Therefore, the activities undertaken under Phase 1 will support the achievement of Georgia's mitigation targets under the NDC. With regard to adaptation, the assessment evaluated the contribution of Phase 1 to strengthening the climate resilience of the power grids in the countries involved. In general, submarine cables are shielded from a range of adverse conditions that might be exacerbated by climate change (including extreme weather events, flooding, and rising temperatures), so including them in the transmission grid can reduce the vulnerability to climate change. The results of the climate and disaster risk screening were reflected in the Phase 1 project design, and the risk of geophysical hazards was considered in the seabed study scope of work. Therefore, the proposed operation is considered aligned with the adaptation goals of the Paris Agreement. At the same time, Phase 1 is expected to support the achievement of Georgia's adaptation goals under the NDC by supporting the design of the BSSC Project in a way to strengthen the resilience of the power sector.
- The Paris Alignment assessments for Phases 2 and 3 will follow when these are prepared and appraised but 55. based on information available at the time of preparation of the MPA, the expectation is that these will fall under the 'universally aligned' activities with regard to mitigation. Electricity transmission is considered universally aligned if transmission lines are not dedicated to evacuation of electricity from new fossil fuel power generation plants or if the

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economic viability of the investment depends on increasing the share of unabated fossil fuel generation in the grid. Neither case is expected for Phases 2 and 3 of the ESPIRE MPA. The risk of non-alignment is therefore considered low.

Activities supported by the program will have sizeable mitigation and adaptation climate co-benefits (CCBs). 56. Mitigation CCBs will be achieved because a large share of the electricity flowing through the BSSC is expected to come from RE sources, as the South Caucasus countries have ambitious plans for RE expansion and the BSSC itself will be enabling higher shares of variable RE integration into the power grids and giving export prospects to RE investors. Based on the results of the pre-feasibility economic analysis, in 2035, about 68 percent of the electricity flowing through the BSSC will come from RE sources, and this share will increase thereafter. On the adaptation side, while the submarine cable system itself will not be subject to significant climate risks, its commissioning will make the power sectors of countries in the region more resilient to climate risks, by providing an alternative source of power and balancing energy to respond to shocks. Tailored designs and advanced technologies will be applied in the development and implementation of the cable landing points, HVDC converter stations, and on-land OHLs to enhance the resilience of the transmission infrastructure to climate risks such as flooding, storms, and sea level rise. For example, the use of the VSC technology will enable a quicker response to electrical disturbances and a prompt restoration of electricity supply in case of blackouts. The infrastructure will be designed to include redundant configurations, elevated converter station equipment, and active monitoring systems, all of which will help effectively prevent failures caused by climate shocks and rapidly recover from breakdowns.

В. **Fiduciary**

- (i) **Financial Management (FM)**
- 57. GSE will be responsible for FM and disbursement during project implementation, including planning, budgeting, accounting, financial reporting, flow of funds, internal controls, and auditing. The FM assessment carried out for GSE concluded that its FM arrangements are acceptable and meet the minimum World Bank requirements. The overall FM residual risk is Moderate, as GSE is experienced in implementing projects funded by the World Bank and other IFIs.
- 58. GSE will be responsible for FM of all Phase 1 project components, including submission of quarterly unaudited interim financial reports (IFRs) and audited annual project and entity financial statements to the World Bank. FM staffing is adequate in GSE in terms of skills, experience, and number of persons. GSE will follow the established planning, budgeting, accounting, internal control, reporting, and auditing procedures described in detail in the Project Operations Manual (POM) under the ongoing ESRFRP. However, the POM will be updated by effectiveness to reflect the proposed project description, PDO, internal control, budgeting, external auditing, financial reporting, and accounting policies and procedures. The annual audited project and entity financial statements, together with the auditor's opinion and the management letter, will be provided to the World Bank within six months after the end of each fiscal year and at the closing of the project. GSE will be responsible for the selection and appointment of the project auditor, according to terms of reference acceptable to the World Bank. Under projects implemented by GSE, annual audited project and entity financial statements were usually submitted to the World Bank on time, and the auditor always issued unmodified opinions on both project and entity financial statements. No major weaknesses in internal controls or accounting errors were highlighted in the management letters issued by the auditor.
- GSE will establish and manage a Designated Account (DA) in euro for disbursement. The DA will be opened in a commercial bank/financial institution acceptable to the World Bank. The loan will disburse through transaction-based disbursement methods that include: (i) payments through the DA based on Statements of Expenditures (SOEs), (ii) payments against special commitments, (iii) reimbursement of eligible expenditures pre-financed by the recipient based on SOEs, and (iv) direct payments to third parties.

(ii) **Procurement**

The procurement arrangements will be governed by the World Bank Procurement Regulations for IPF Borrowers 60. (5th Edition, September 2023). Procurement processes will be carried out through the Systematic Tracking of Exchanges in Procurement (STEP) online platform. Phase 1 will be implemented in accordance with the agreed procedures as outlined

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in the Regulations for Borrowers, Procurement Plan, and the Project Procurement Strategy for Development (PPSD), which describes all major procurement-related aspects and was prepared by GSE. The seabed surveys under Component 1 will be procured using an international competitive procurement process, with prequalification of suppliers and a request for bids to be evaluated based on rated criteria. GSE will manage the procurement with support from the consulting firm (CESI). Fourteen potential bidders that have been identified in the PPSD will be informed by GSE about the launch of prequalification. The proposed selection methods for the activities under Component 2 are detailed in the PPSD.

C. **Legal Operational Policies**

| Legal Operational Policies | Triggered? |
|---|------------|
| Projects on International Waterways OP 7.50 | Yes |
| Projects in Disputed Area OP 7.60 | No |

61. Phase 1 of the program triggers OP 7.50, as the geophysical and geotechnical studies concern investments that risk causing pollution to the Black Sea, which is considered an international waterway as defined in paragraph 1 of the policy. The E&S screening identifies the impact on marine habitat and biodiversity from the emission of electromagnetic fields and thermal radiation as potentially significant, while the impact in terms of temperature increase is less pronounced. If financing for such a project is proposed, the World Bank usually requires that the beneficiary state, if it has not already done so, formally notifies the other riparian states. Since the seabed studies financed under Phase 1 of the MPA are part of the feasibility study process, the exception to the riparian notification requirement under paragraph 7(b) applies. The exception to the notification requirement was approved by the Europe and Central Asia Regional Vice Presidency on October 24, 2023.

D. **Environmental and Social**

- 62. The overall E&S risk for the MPA may be Substantial or High, depending on the cable routing decisions yet to be taken, while Phase 1 risk is rated High. All Environmental and Social Standards (ESS) other than ESS7 (Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities) and ESS9 (Financial Intermediaries) are considered relevant for Phase 1 of the program. The geophysical and geotechnical investigations of the Black Sea seabed are not expected to cause tangible pollution or other damage to the environment. The conclusions of the seabed studies and the site-specific E&S instruments for OHLs and the submarine cable system undertaken in Phase 1 will shape the E&S due diligence to be applied in Phases 2 and 3. Phase 1 seabed studies and the siting of the landing points will have very limited social risks and impacts, relating mainly to labor and working conditions on board the vessels and the potential for disrupting fisheries-based livelihoods.
- 63. Construction of the OHLs in Georgia in Phase 2 of the program will carry multiple environmental risks. Part of the works may have to be undertaken on steep slopes with natural forest ecosystems and little if any access roads. Vegetation clearance for creation of the right-of-way, earthworks, erection of towers, and stringing of OHL will be highly challenging in the difficult terrain and will carry risks of excessive damage of the vegetative cover, disturbance of wildlife, triggering of erosion, and pollution of the environment with waste dumped down the slopes as well as risks to the health and safety of workers. Poor organization of work sites, lack of planning for the disposal of excess material and waste from vegetation clearing, delayed action, and an ad-hoc approach to site reinstatement have been experienced during the implementation of the ongoing TGSP. The risk of encountering similar issues is present in the ESPIRE Program as well. However, GSE has learned from that experience and has improved its capacity for risk management since then. At the stage of detailed design, resilient decisions are to be made in the selection of exact locations for towers as their placement will define the extent of permanent impacts on the aesthetical and touristic value of the impact area. The construction of the OHL in the territory of Romania to connect the landing point with the grid is not part of the IBRD-financed Phase 2 of

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the ESPIRE Program at present. However, it is part of the scope of the ESIA that will be undertaken during Phase 1 and would be treated as associated facility to the undersea cable under the ESF.

- 64. The seabed studies will provide the technical information required for an exhaustive understanding of the environmental dimensions of laying the submarine cable system in Phase 3 of the Program. It is known up front that the construction of the submarine cable system will mostly imply moderate physical intervention to the seabed landscape. Impacts are expected to be greater in shallow waters and around the landing points, where the cable system will have to be buried or otherwise protected from exposure to mechanical damage. Depending on the feasibility of engineering solutions for the landing point in Georgia, the cable system may cross a marine protected area, fragile coastline ecosystem, and internationally protected wetlands. The operation phase impact on aquatic life will be studied as part of the ESIA along with construction phase impacts. However, it is scientifically established that there is no life in the Black Sea below 150-200 m due to the absence of oxygen and high concentration of hydro-sulfur. This suggests that the impacts on the organic receptors will be confined to shallow areas of the sea closer to the landing points. Overall, the environmental impacts in the deep sea are expected to be more modest than those expected at the landing points and from the OHLs.
- 65. Social risk for Phases 2 and 3 is classified as Moderate, with the risks and impacts expected to be mostly temporary and predictable and manageable with adequate management plans and human and financial resources. Risks and impacts include minor permanent and temporary land acquisition or easement restrictions, labor and working conditions risks during construction, community health and safety risks during construction and operation, sexual exploitation and abuse/sexual harassment (SEA/SH) risks during construction, and risks relating to inadequate stakeholder engagement and grievance management. The laying down of the cable system will have very limited social impacts mainly relating to labor and working conditions and the potential for disrupting fisheries-based livelihoods.
- 66. To understand and manage the risks and impacts of the Phase 1 project activities, the following instruments were prepared: (a) Scoping Study for a detailed understanding of the risks, expected impacts, and measures to address them, as well as terms of reference for the ESIA of the Georgia and Romania OHLs and the submarine cable system; (b) Labor Management Procedures; (c) Stakeholder Engagement Plan (SEP), including grievance redress mechanism; and (d) Environmental and Social Commitment Plan. An RPF, site-specific RAP(s), and the ESIA for the OHLs and the submarine cable system will be developed during implementation, when the exact scope and scale of risks and impacts are clearer.
- E. **Other Corporate Priorities**
- (i) Gender
- 67. Despite high educational achievements, women face more limited access to economic opportunities than men in technical sectors in Georgia. In Georgia, women tend to be concentrated in the humanities, education, and healthcare sectors and are often locked in economic activities with lower earnings. Female representation in the science, technology, engineering, and math fields such as energy remains relatively low.
- 68. GSE is a case in point of the gender disparities in the Georgian energy sector and struggles to attract female talent, but the company has shown progress recently. In 2023, around 23 percent of GSE's employees were female (both head and regional offices). Moreover, while the Supervisory Board is 40 percent female (as required by the Corporate Governance Code), there are currently no women among the eight members of the Board of Directors. However, statistics show slight increase in the share of female employees at GSE in the last 3 years, including at managerial positions. In 2021, out of 1,562 employees in GSE, the number of female employees were 353, including 40 women in managerial positions (11 percent of employed women). In 2023, out of 1,676 employees in GSE, 381 were women, including 62 in managerial positions (16 percent of employed women). Women are employed mostly at head office of GSE. As for March 2024, overall employees in the head office of GSE were 1,106 (328 woman and 778 men). Due to the more technical nature of the jobs, more men tend to be employed in regional offices (at substations and transmission line facilities). In 2023, only 136 out of 340 employees that attended trainings at GSE's training center or other external trainings (40 percent) were female.

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Notably, in recent years GSE has also struggled to attract female engineers at entry level to improve the gender balance among its workforce. Currently, 29 percent of its interns (10 out of 35) are female.

69. In Phase 1 of the MPA, GSE will take measures to provide the company with a more gender-balanced talent pool. The measures aim to address the fact that although women in Georgia enjoy substantial access to education, this does not translate into equal employment balance in technical fields. Building on successful experience by GSE in a program piloted with USAID funds, GSE will continue this practice in future and will attract additional funding for a monthly stipend for female employees and interns that attend trainings at GSE's training center and will organize dedicated workshops/trainings for female employees. Moreover, GSE will encourage more female employees to become trainers at GSE's training center by providing combination of financial and non-financial incentives. Replicating the arrangement in the program for training of staff, GSE will also provide a monthly stipend and provide targeted learning opportunities to female interns. The internship program will target young female graduates from technical universities in Georgia through outreach campaigns, including campus visits and ads. Progress in this area will be monitored through dedicated indicators (see Results Framework in Section VII).

(ii) Citizen Engagement

- A dedicated website will be set up for the BSSC Project to disseminate the outcomes of the preparatory studies, which offer an entry point for early public outreach and citizen engagement. The engagement of the local population, civil society organizations, media, citizen organizations, and the public is deemed essential to the success of the BSSC Project. The dedicated website could include: (i) information on the BSSC Project's scope, activities, status, and its relevance for the power sectors of countries in the South Caucasus and Southeast Europe; (ii) explanations on the importance of RE and how the BSSC Project can support the energy transition; (iii) interactive elements that invite citizens and stakeholders to ask questions and receive timely responses; (iv) a grievance redress mechanism open to any project-related issues, which would allow to record, process, and provide meaningful response and/or resolution to feedback received; and (v) a calendar for planned citizen and stakeholder engagement activities. The launch of the website will be accompanied by an awareness-raising campaign that will include participatory consultations and roundtable discussions with civil society organizations, citizens (especially representatives of vulnerable and minority groups), and environmental organizations. The effectiveness of the citizen engagement efforts will be measured through annual surveys.
- 71. In addition to the BSSC Project website, Phase 1 of the program will foster continuous dialogue among a variety of stakeholders and support international coordination on the BSSC Project. Relevant stakeholders include the countries involved in the BSSC Project and other countries in the region, stakeholders from the energy and other potentially important or affected sectors (for example, fisheries and gas pipeline owners), as well as civil society organizations. The facilitated exchange will take place regularly and take the form of a two-way communication through which the project is informed by inputs from the multi-stakeholder group, and stakeholders are updated about project development and have the opportunity to raise potential concerns or grievances.
- 72. The Phase 1 project will take special measures to ensure that disadvantaged and vulnerable groups have equal opportunity to access information, provide feedback, or submit grievances. Such groups may include people with disabilities, the elderly, single-parent households, internally displaced persons, and socially vulnerable households. The deployment of community liaison officers will help ensure proactive outreach to all population groups. Training and awareness-raising sessions will be conducted in villages rather than municipal centers to ensure higher participation of this targeted population. Social media channels will be used as much as possible to disseminate information given that research during the preparation of SEP confirmed the high rate of use of social media (especially Facebook and WhatsApp) across users of different ages and backgrounds in Georgia.

(iii) Private Sector Mobilization

73. The MPA program is expected to directly mobilize commercial financing and private capital for the construction of the power and digital interconnections, as well as enable private investments in power generation. The PCM by the

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program is expected to include commercial financing raised by the participating SOEs to finance the power interconnection and private capital for the construction of the fiber-optic cable. The PCE by the MPA Program is expected to include upstream investments in power generation from RE across the participating South Caucasus countries. ²¹ The program will track PCM and PCE through dedicated PrDO-level indicators (see Section I.E (iii) for details).

74. The Phase 1 project is compliant with the Maximizing Finance for Development (MFD) approach. As part of Components 1 and 2 of this first phase of the MPA, the project is advancing the technical, legal, financial, and commercial preparation of the BSSC Project, which is expected to involve substantial private capital mobilization (see above). As such, this phase supports the enabling of a private sector solution for the BSSC Project. It is expected that the preparatory work completed under this phase will enable PCE and PCM to be generated (and attributed) in subsequent phases of the MPA.

V. GRIEVANCE REDRESS SERVICES

75. **Grievance redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project-affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, visit https://accountability.worldbank.org.

VI. KEY RISKS

A. Summary of MPA Program Risks (Key Risks to the PrDO)

76. The MPA Program risk is rated High, with key risks to the PrDO related to the institutional capacity for implementation, sector strategies and policies, fiduciary, environmental and social, stakeholders, as well as exogenous risks related to security. While GSE has experience with the implementation of World Bank-financed transmission investment projects, the complex, strategic, and highly sensitive nature of the BSSC Project and the required involvement of other entities that will contribute to the implementation of the Project make the implementation capacity risk of the MPA Program significant. In addition, considerable uncertainty remains on whether the FID for the BSSC Project will be taken, and the fact that the long-term utilization of the infrastructure hinges upon RE capacity expansion, transmission grid strengthening, and the gradual liberalization of the power markets in the South Caucasus poses risks related to the readiness and capacity levels of the other countries involved. Stakeholder risks mainly stem from the effectiveness of the intergovernmental institutions and the need to reach commercial agreements on the allocation of costs and benefits of the investment, as well as the engagement with the countries whose EEZs will be crossed. These risks will be partially mitigated by the TA components included in all Program phases to support the preparation, structuring, and coordination of the BSSC Project. In particular, the implementation capacity and stakeholder risks will be mitigated through extensive outreach and coordination efforts with the countries involved in the Project and other sponsors, including the EU. In any case, these risks are expected to remain high until the countries involved reach an agreement on the structuring and financing of the Project and/or a strong developer/leader (e.g., a private sector entity) is included in the shareholding structure. Exogenous risks mainly stem from the high levels of uncertainty and the geopolitical tensions in the region, which could potentially affect the Program.

²¹ The PCE is expected in Phase 3.

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B. Summary of Phase 1 Risks (Key Risks to the Phase 1 PDO)

- 77. **Overall (Phase 1) Moderate.** The overall risks to the PDO of Phase 1 are rated Moderate. The key risks (described below) are related to sector strategies and policies, fiduciary, E&S, stakeholders, and security.
- 78. **Sector Strategies and Policies Substantial.** Despite project-specific activities, progress toward readiness of the BSSC Project will also depend on the South Caucasus countries continuing to make parallel progress toward policy alignment with the European Green Deal and clean energy expansion and toward aligning their power sector policies with EU and ENTSO-E regulations. These risks will be partially mitigated by Georgia's strong track record in implementing reforms, its effective policy dialogue with the World Bank Group, and the TA provided under Component 2.

79. **Fiduciary – Substantial:**

- Procurement Substantial. GSE has experience with the World Bank's Procurement Framework and Regulations, as well as the STEP tool to process the required procurement activities. However, recent experience with high-value, complex contracts showed implementation delays and highlighted the need to further strengthen contract management capacity. Moreover, while GSE has procurement-trained staff, further training will be needed, especially for a procurement specialist that joined recently. Considering the complexity of the seabed studies, the staff turnover, and the need to use rated criteria, procurement risk is considered substantial. To address this risk, the following mitigation measures will be implemented: (i) training in upstream and downstream procurement will be provided by the Bank's specialists to GSE's procurement staff; (ii) an experienced consulting firm will be used to support contract management; and (iii) hands-on support will be provided by the Bank on a need basis, including support with use of rated criteria.
- **Financial Management Moderate.** GSE has sufficient staff capacity and experience dealing with FM policies and procedures in the implementation of World Bank-financed projects.
- 80. **Environmental and social High.** The Black Sea seabed investigations are not expected to cause tangible pollution or other damage to the environment. However, since the conclusions of the studies undertaken under Phase 1 will shape the E&S due diligence to be applied in Phases 2 and 3, the environmental risk of Phase 1 is considered high. The social risk is classified as moderate, as the seabed studies will have very limited social impacts, mainly relating to labor conditions on board the vessels and the potential for disrupting fisheries-based livelihoods.
- 81. **Stakeholders Substantial.** The countries and the TSOs participating in the BSSC Project will also need to remain engaged and aligned throughout the implementation of Phase 1 to achieve the PDO. The EU and ENTSO-E are also important stakeholders, given the EU's interest in the Project and the fact that compliance with ENTSO-E regulations and EU directives is a requirement for the commissioning of the power interconnection to be addressed early on. Additional risks are related to the required cooperation among countries in the South Caucasus and Southeast Europe in reaching a structuring and financing agreement for the Project. High-level government engagement among countries and institutions will be needed to mitigate these risks, supported by specialized expertise provided through consultants and TA. The implementation of the SEP and the establishment of Georgia's IWG and a multi-stakeholder group to foster continuous dialogue among all parties will help mitigate the stakeholder risk.
- 82. **Other (Security) Substantial.** Regional geopolitical tensions could affect access to certain areas of the Black Sea where the geophysical and geotechnical surveys of the seabed will have to be conducted. In view of the evolving situation, these risks will be evaluated through a specific security risk assessment. This assessment would also inform the FID and its timing, as well as potential mitigation measures.

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VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

| Baseline | Closing Period | | | | |
|--|---|--|--|--|--|
| Improved implementation readiness of the Black Sea Submarine Cable Project | | | | | |
| A geophysically and geotechnically viable corridor for a submarine cable system (power and digital) between the South Caucasus and Southeast Europe across the Black Sea has been identified (Yes/No) | | | | | |
| Dec/2023 Jun/2026 | | | | | |
| No | Yes | | | | |
| Intra-governmental institutions with the capacity to coordinate and facilitate green ene operationalized in Georgia (Yes/No) | Intra-governmental institutions with the capacity to coordinate and facilitate green energy projects between the S. Caucasus and Southeast Europe have been established and operationalized in Georgia (Yes/No) | | | | |
| Dec/2023 Jun/2025 | | | | | |
| No | Yes | | | | |
| The technical, environmental, and social documentation of the BSSC Project and the OH | ILs in Georgia and Romania is ready for implementation (Yes/No) | | | | |
| Dec/2023 | Jun/2028 | | | | |
| No | Yes | | | | |
| A roadmap for alignment of the Georgian power sector with EU and ENTSO-E regulations has been adopted and is under implementation, with the wholesale market opening and unbundling reforms completed (Yes/No) | | | | | |
| Dec/2023 | Jun/2026 | | | | |
| No | Yes | | | | |

Intermediate Indicators by Components

| Deceline | Clasing Pariod | | | |
|---|--------------------------|--|--|--|
| Baseline Closing Period | | | | |
| | Black Sea seabed surveys | | | |
| The geophysical and geotechnical investigations of the Black Sea seabed for the BSSC Project have been completed (Yes/No) | | | | |
| Dec/2023 | Jun/2026 | | | |
| No | Yes | | | |
| Legal and financial advisory and technical assistance | | | | |
| A domestic Interministerial Working Group with the capacity to facilitate decision-making within the Government of Georgia with regard to the BSSC Project has been established | | | | |
| and operationalized (Yes/No) | | | | |

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Enhancing Energy Security through Power Interconnection and Renewable Energy Program(P179950)

| Dec/2023 | Jun/2025 | | | | |
|---|--|--|--|--|--|
| No | Yes | | | | |
| Necessary permits and approvals required prior to procurement of the BSSC Project have been obtained (Yes/No) | | | | | |
| Dec/2023 | Dec/2028 | | | | |
| No | Yes | | | | |
| A roadmap for alignment of the Georgian power sector with EU and ENTSO-E regulations has been developed (Yes/No) | | | | | |
| Dec/2023 | Jun/2025 | | | | |
| No | Yes | | | | |
| The BSSC Project has been included in ENTSO-E's TYNDP and has o | obtained Project of Mutual Interest (PMI) status (Yes/No) | | | | |
| Dec/2023 | Dec/2026 | | | | |
| No | Yes | | | | |
| A pre-investment stage project company for the implementation of | of the Black Sea Submarine Cable Project has been formed (Yes/No) | | | | |
| Dec/2023 | Jun/2026 | | | | |
| No | Yes | | | | |
| An investment stage project company for the implementation of t | the BSSC Project has been formed and cost allocation between participating countries has been decided (Yes/No) | | | | |
| Dec/2023 | Jun/2028 | | | | |
| No | Yes | | | | |
| The BSSC Project infrastructure has been designed in a way to enh | nance its resilience to climate risks (Yes/No) | | | | |
| Dec/2023 Jun/2028 | | | | | |
| No | Yes | | | | |
| Level of satisfaction among citizens and other stakeholders involved | ed in the citizen engagement activities under the Program (Percentage) | | | | |
| Dec/2023 | Jun/2028 | | | | |
| n.a. | 70 | | | | |
| GSE's organizational Code of Conduct has been updated to ensure | that it adequately covers sexual exploitation and abuse/sexual harassment (SEA/SH) issues (Yes/No) | | | | |
| Dec/2023 | Jun/2028 | | | | |
| No | Yes | | | | |
| Share of female interns at GSE (Percentage) | | | | | |
| Dec/2023 | Jun/2029 | | | | |
| 29 40 | | | | | |
| Share of GSE's female interns receiving full-time employment in the energy sector within 12 months after graduation or completion of the internship (whichever is later) (Percentage) | | | | | |
| Dec/2023 | Jun/2029 | | | | |
| n.a. | 30 | | | | |

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Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes

| Improved implementation | on readiness of the Black Sea Submarine Cable Project | | | |
|---------------------------------------|---|--|--|--|
| A geophysically and geo | technically viable corridor for a submarine cable system (power and digital) between the South Caucasus and Southeast Sea has been identified (Yes/No) | | | |
| Description | This indicator measures the outcomes of the seabed studies, specifically if a viable corridor for a submarine cable system (power and digital) was identified. | | | |
| Frequency | Quarterly | | | |
| Data source | GSE Project Progress Reports | | | |
| Methodology for Data Collection | Contract monitoring by GSE's International Projects Department | | | |
| Responsibility for Data Collection | GSE | | | |
| Intra-governmental insti | tutions with the capacity to coordinate and facilitate green energy projects between the South Caucasus and Southeast | | | |
| Europe have been estab | lished and operationalized in Georgia (Yes/No) | | | |
| Description | This indicator measures whether the national intra-governmental institutions created by Georgia have sufficient resources and capacity to fulfil the mandate of coordinating and facilitating green energy projects between the South Caucasus and Southeast Europe. | | | |
| Frequency | Quarterly | | | |
| Data source | Legal and organizational information on institutions created by Georgia | | | |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department | | | |
| Responsibility for Data Collection | GSE | | | |
| The technical, environm (Yes/No) | ental, and social documentation of the BSSC Project and the OHLs in Georgia and Romania is ready for implementation | | | |
| Description | This indicator measures whether the contracts for the preparation of the infrastructure tender documents and the E&S documentation required before the investment decision on the project by its sponsors have been completed. | | | |
| Frequency | Quarterly | | | |
| Data source | GSE Project Progress Reports | | | |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department | | | |
| Responsibility for Data Collection | GSE | | | |
| | t of the Georgian power sector with EU and ENTSO-E regulations has been adopted and is under implementation, with pening and unbundling reforms completed (Yes/No) | | | |
| Description | This indicator measures whether Georgia has adopted a clear policy road map to ensure compliance with all legal and regulatory requirements for optimal utilization of the BSSC infrastructure. It also measures whether Georgia has made substantial progress toward implementation by implementing the wholesale market opening and unbundling reforms. | | | |
| Frequency | Quarterly | | | |
| Data source | Policy documents adopted by Georgia's MoESD | | | |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department | | | |
| Responsibility for Data Collection | GSE | | | |

Monitoring & Evaluation Plan: Intermediate Results Indicators by Components

| Geophysical and geotechnical surveys of the Black Sea seabed | | | |
|---|---|--|--|
| The geophysical and geotechnical investigations of the Black Sea seabed for the BSSC Project have been completed (Yes/No) | | | |
| Description | This indicator measures progress toward the completion of the seabed study contracts. | | |
| Frequency | Quarterly | | |
| Data source | GSE Project Progress Reports | | |

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| Methodology for Data Collection | Contract monitoring by GSE's International Projects Department |
|---------------------------------------|---|
| Responsibility for Data Collection | GSE |
| Legal and financial advise | ory and technical assistance |
| A domestic Interminister | rial Working Group with the capacity to facilitate decision-making within the Government of Georgia concerning the ple Project has been established and operationalized (Yes/No) |
| Description | This indicator measures whether the IWG has been established, members have been appointed, and sufficient resource and capacity are in place to ensure its effectiveness. |
| Frequency | Quarterly |
| Data source | GSE Project Progress Reports |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department |
| Responsibility for Data Collection | GSE |
| Necessary permits and a | pprovals required prior to procurement of the BSSC Project have been obtained (Yes/No) |
| Description | The legal study under the feasibility study as well as the legal advisory under Component 2 of the Phase 1 project will help the project sponsors identify the permitting and approval requirements. This indicator measures progress toward obtaining the permits and approvals required before launching procurement of the BSSC Project. |
| Frequency | Quarterly |
| Data source | GSE Project Progress Reports |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department |
| Responsibility for Data Collection | GSE |
| A roadmap for alignment | t of the Georgian power sector with EU and ENTSO-E regulations has been developed (Yes/No) |
| Description | This indicator measures whether Georgia has developed a clear policy road map to ensure compliance with all legal and regulatory requirements for optimal utilization of the BSSC infrastructure. |
| Frequency | Quarterly |
| Data source | GSE Project Progress Reports |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department |
| Responsibility for Data Collection | GSE |
| The BSSC Project has bee | en included in ENTSO-E's TYNDP and has obtained Project of Mutual Interest (PMI) status (Yes/No) |
| Description | This indicator measures whether the project is included in the TYNDP as a planned project and has obtained PMI status |
| Frequency | Quarterly |
| Data source | ENTSO-E, EU Commission, and GSE Project Reports |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department |
| Responsibility for Data Collection | GSE |
| A pre-investment stage p | project company for the implementation of the Black Sea Submarine Cable Project has been formed (Yes/No) |
| Description | This indicator measures the progress toward the establishment of a pre-investment-stage project company designated for the preparation of the BSSC Project. |
| Frequency | Quarterly |
| Data source | Legal documentation of the project company and GSE Project Progress Reports |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department |
| Responsibility for Data Collection | GSE |

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| | This indicator measures the progress toward the establishment of an investment-stage project company designated for | | |
|--|---|--|--|
| Description the implementation of the BSSC Project. It also measures progress toward agreement on key commercial issue | | | |
| | are expected to be captured in a final decision on cost allocation between countries. | | |
| Frequency | Quarterly | | |
| Data source | Legal documentation of the project company and GSE Project Progress Reports | | |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department | | |
| Responsibility for Data Collection | GSE | | |
| The BSSC Project infrast | ructure has been designed in a way to enhance its resilience to climate risks (Yes/No) | | |
| Description | This indicator measures whether the terms of reference for the technical specifications of the on-land and submarine infrastructure under the project adequately reflect climate risks and whether these contracts have been completed. | | |
| Frequency | Quarterly | | |
| Data source | GSE Project Progress Reports | | |
| Methodology for Data Collection | Contract monitoring by GSE's International Projects Department | | |
| Responsibility for Data Collection | GSE | | |
| | I ong citizens and other stakeholders involved in the citizen engagement activities under the Program (Percentage) | | |
| Description | This indicator measures satisfaction among citizens who participate in GSE's outreach activities in local communities that may be affected by the on-land and landing point infrastructure of the BSSC Project. | | |
| Frequency | Quarterly | | |
| Data source | GSE Project Progress Reports | | |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department | | |
| Responsibility for Data Collection | GSE | | |
| GSE's organizational Coc (SEA/SH) issues (Yes/No | le of Conduct has been updated to ensure that it adequately covers sexual exploitation and abuse/sexual harassment | | |
| Description | This indicator measures whether GSE's Corporate Code of Conduct has been updated in line with GSE's Environmental and Social Management System and has been found to adequately cover SEA/SH issues. | | |
| Frequency | Quarterly | | |
| Data source | GSE Project Progress Reports | | |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department | | |
| Responsibility for Data Collection | GSE | | |
| Share of female interns | at GSE (Percentage) | | |
| Description | This indicator measures the percentage of women in GSE's internship program. | | |
| Frequency | Yearly | | |
| Data source | GSE Project Progress Reports | | |
| Methodology for Data Collection | Monitoring by GSE's International Projects Department | | |
| Responsibility for Data Collection | GSE | | |
| Share of GSE's female in | terns receiving full-time employment in the energy sector within 12 months after graduation or completion of the | | |
| internship (whichever is | | | |
| Description | This indicator measures the percentage of female interns in GSE's internship program that have received full-time employment in the energy sector within 12 months after graduation or completion of the internship (whichever is later). | | |
| Frequency | Yearly | | |
| Data source | GSE Project Progress Reports | | |
| Methodology for Data Collection | Surveys and data processing by GSE's International Projects Department | | |
| | | | |

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Enhancing Energy Security through Power Interconnection and Renewable Energy Program (P179950)

Responsibility for Data
Collection

GSE

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ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Georgia

Enhancing Energy Security through Power Interconnection and Renewable Energy Program

A. Implementation Arrangements

- 1. Phase 1 of the proposed ESPIRE MPA Program will be implemented by GSE, Georgia's state-owned power transmission and dispatch company. GSE has gained significant experience owing to the implementation of transmission network construction and rehabilitation projects supported by various development partners, including the World Bank, Kreditanstalt für Wiederaufbau, European Bank for Reconstruction and Development, and Asian Development Bank. In its experience implementing World Bank projects, GSE has been directly involved in all aspects of project implementation and has become familiar with the World Bank's fiduciary and E&S policies and procedures.
- 2. **GSE's IPRD will be the responsible project implementation unit for the Phase 1 IBRD loan.** The IPRD will coordinate overall project activities and involve other GSE units and departments, most importantly the Intersystem Agreements and International Interconnection Department which is leading the preparation of the BSSC Project. The following key staff of IPRD will be involved in the implementation of the project: the head of the department, the deputy head/international procurement head (responsible for overall project management), the manager for World Bank projects, a power engineering consultant, a procurement specialist, an FM specialist, an environmental consultant, a social development consultant, an administrative coordinator, and a communication expert. The IPRD will be engaging the following main departments of GSE for specific tasks related to the project: (a) the Intersystem Agreements and International Interconnection Department; (b) the International Projects Planning and Technical Supervision Department; (c) the Environmental, Social Affairs, and Permits Department for resettlement and construction permits; (d) the Accounting and Financial Department for treasury functions; (e) the Public Relations Department for the implementation of the SEP; and (f) the Legal Department.
- 3. Component 1 and the technical and institutional strengthening activities under Component 2 will be monitored by GSE's IPRD, while the legal and financial advisory activities under Component 2 will be monitored by GSE's Financial Department, based on agreed monitoring arrangements and required reporting procedures. The IPRD has demonstrated the capacity to monitor investments from a technical and E&S perspective and has gained significant experience monitoring implementation processes and measuring outcomes. The IPRD will be responsible for elaborating a monitoring and evaluation (M&E) manual as part of the POM, which will guide the overall M&E activities, and providing the required semiannual implementation progress status reports. The activities to be monitored include the timely and efficient implementation of the geophysical and geotechnical investigations of the Black Sea seabed and the development of the technical and E&S documentation for the submarine cable system and the on-land OHL. The Financial Department is adequately staffed and has the capacity to supervise the implementation of the legal and financial advisory activities under Component 2.
- 4. **Project-specific data and information on the monitoring indicators agreed upon will be provided by GSE.** Section VII presents the Results Framework for Phase 1 of the program, which defines the specific indicators to be monitored. In addition, the World Bank will carry out the standard review procedures and carry out regular implementation support missions to review the progress with the implementation of Phase 1 of the program.
- (i) Financial Management Arrangements
- 5. **GSE** will be responsible for FM and disbursement during project implementation, including planning, budgeting, accounting, financial reporting, funds flow, internal controls, and auditing. The FM assessment of GSE was carried out and concluded that the FM arrangements are acceptable and meet the minimum World Bank requirements.

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The overall FM residual risk is Moderate. GSE is experienced in implementing World Bank and other IFIs funded projects.

- 6. **Staffing.** One full-time project FM specialist with relevant experience in World Bank-financed projects and knowledge of World Bank FM policies and procedures has been assigned to assist the GSE in managing the project-related FM and disbursement work. The FM specialist has attended the World Bank-organized fiduciary trainings. In addition, an FM coordinator is planned to be hired to oversee the projects implemented by GSE in parallel with various IFIs.
- 7. **Budgeting.** GSE has acceptable budgeting and planning capacity. Under the ongoing ESRFRP, annual project budgets are prepared based on the agreed Procurement Plan, and annual budgets are endorsed by the Chairperson of the GSE Board of Directors and the MoESD of Georgia. This practice will continue under this proposed project.
- 8. **Accounting.** The accounting books and records of GSE are maintained on an accrual basis and follow local legislation. GSE financial statements are prepared in accordance with the International Financial Reporting Standards. Project financial statements, including IFRs, are presented in US dollars, and are prepared in accordance with Cash Basis following requirements of the International Public Sector Accounting Standards. This is acceptable, and this practice will continue under this project. The POM under the ongoing ESRFRP properly reflects accounting policies and procedures and will be used under the proposed project; however, it should be updated to reflect the proposed project-related internal control, budgeting, external auditing, financial reporting, and accounting policies and procedures. All supporting documents will be maintained in files for ready access by auditors and the World Bank staff. The project's chart of accounts will track all transactions and report them according to source of financing project components and type and category of expenditure.
- 9. **Internal controls.** The internal control systems at GSE are acceptable to the World Bank. In the Financial Management Manual (FMM) chapter of the POM adopted for the ongoing ESRFRP, project-related specific internal control activities are well described. The FMM chapter includes procedures related to expenditure authorization; approval of invoices and processing of payments; data backup; reconciliation of project records with Client Connection; and safeguarding of assets, including cash. This section of the POM also reflects the policies and procedures that clearly define conflict of interest and related-party transactions (real and apparent) and provides safeguards to protect the organization from associated risks. There are proper controls over the authorization of expenditures and approval of payments under the project. All expenditures are authorized by the GSE Chairperson of the Board of Directors or by a person acting on his/her behalf in case of his/her absence and verified for eligibility and accuracy by the Head of the Financial Department. These will apply to this project as well, and it was agreed with GSE that the POM would be updated by effectiveness to include specific project-related activities.
- 10. **Reporting.** Project-management-oriented unaudited IFRs will be prepared under this project. GSE will produce a full set of IFRs every calendar quarter throughout the life of the project. The format of IFRs has been agreed upon during the assessment and includes (a) Project Sources and Uses of Funds, (b) Uses of Funds by Project Activities, (c) DA Statements, (d) Disbursement Summary, and (e) a Statement of Expenditure Withdrawal Schedule. IFRs will be produced by the accounting software. These financial reports will be submitted to the World Bank within 45 days of the end of each calendar quarter.
- 11. **Auditing.** GSE will be responsible for arranging the annual audit of project and entity financial statements. The project audit will be conducted by an independent private auditor acceptable to the World Bank, on terms of reference acceptable to the World Bank, and selected by GSE and according to the International Standards on Accounting issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants. The terms of reference will include (a) audits of project financial statements, (b) assessments of the accounting system, and (c) a review of the internal control mechanisms. Similarly, GSE entity financial statements will be audited by an independent

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auditor. Table 1.1 identifies the required audit reports that will be submitted by GSE together with the due date for submission.

Table 1.1. Audit Reports to be Submitted by GSE.

| Audit Report | Due Date |
|---|--|
| The Project Financial Statements include Project Sources and Uses of Funds, | Within 6 months of the end of each fiscal year and |
| Uses of Funds by Project Activities, SOE Withdrawal Schedule, DA Statement, | at the closing of the project |
| Notes to the Financial Statements, and Reconciliation Statement. | |
| Financial statements - continuing entity (GSE) | Within 6 months of the end of each fiscal year |
| The financial statements include (a) a statement of financial position, (b) a | |
| statement of comprehensive income, (c) a statement of changes in equity, | |
| (d) a statement of cash flows, and (e) notes, comprising a summary of | |
| significant accounting policies and other explanatory information. | |

- 12. The audited project financial statements will be publicly disclosed in a manner acceptable to the World Bank. Following the World Bank's formal receipt of these statements from the borrower, the World Bank makes them available to the public in accordance with the World Bank Policy on Access to Information.
- 13. **Disbursement.** The flow of funds will follow the standard World Bank procedures, with loan proceeds being disbursed to a segregated DA held by the implementing agency at a commercial bank/financial institution acceptable to the World Bank, for payments of eligible project expenditures. In addition, the following disbursement methods would also be available under the project: direct payments, reimbursements, and special commitments. Details on the ceiling of the DA as well as all other disbursement-related requirements will be provided in the Disbursement and Financial Information Letter (DFIL). Withdrawal applications with supporting SOEs documenting payments made from the DA shall be submitted on a monthly basis. The format of the SOE is provided in the DFIL. Retroactive financing will be allowed under the project based on the standard conditions for IBRD loans, that is, up to 20 percent of the loan funds and up to 12 months before the signing date of the Loan Agreement. Only the activities to be financed under component 1 of the project (Geophysical and geotechnical investigations of the Black Sea seabed) will be eligible for retroactive financing.

(ii) Procurement Arrangements

- 14. The procurement arrangements will be governed by the World Bank Procurement Regulations for IPF Borrowers (Fifth Edition, September 2023). Procurement processes will be carried out through the STEP online platform. The project will be implemented in accordance with the agreed procedures as outlined in Regulations for Borrowers, Procurement Plan, and the PPSD, which describes all major procurement-related aspects. The PPSD contains, among others, a brief description of the project procurement approach for all key procurement categories of non-consulting (for Component 1) and consulting service contracts (for Component 2). The project consist of seabed investigations, which are a specialized non-consultancy task, as well as a number of consultancy contracts for technical support. The project does not include any major goods and works contracts. The PPSD also describes (a) market analyses for proposed procurement categories, (b) an assessment of procurement risks and mitigation measures, (c) stakeholder analyses, (d) the procurement schedule, and (e) and draft Procurement Plan. The PPSD reflects on topics related to market analysis, operational context, client assessment, social aspects, and procurement risk analysis.
- 15. With regard to Component 1, the consultancy consortium led by the Italian firm CESI (which is conducting the feasibility study under the ongoing ESRFRP) has in its scope, among others, the preparation of the implementation plan, procurement strategy, and bidding documents for the subsequent geophysical and geotechnical investigations of the Black Sea seabed. This would help with advance procurement processing of Component 1 of the new project. The bidding documents, in addition to the employer's requirements, will include

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rated criteria (rated criteria as award criteria is mandatory for International Competitive Bidding since September 1, 2023). Therefore, the procurement strategy and arrangements for Component 1 are expected to include limited international market approach following prequalification (prequalification will apply because, due to the sensitivity of the employer's requirements, such as identified routes for cable system, and so on, it is advisable to share the employer's requirements only with a limited number of bidders that will be prequalified) and rated criteria to be developed by CESI as part of bidding documents and accepted by the client.

16. Component 2 is expected to consist of the following assignments, with proposed selection methods elaborated in the PPSD: (a) stakeholder communication and engagement implementation, (b) a security study to identify security risks and inform decisions, (c) the ESIA that could include geotechnical studies, (d) the development of the RPF, and (e) other TA for the preparation of the next phase of the project framework.

B. Implementation Support Plan

- 17. **The proposed implementation support plan is detailed in Table 1.2.** The highly specialized nature of the geophysical and geotechnical investigations of the Black Sea seabed and the wide range of TA activities to be procured and supervised under Component 2 will require close implementation support, especially in the first year. At least three full team missions and continuous involvement of the task team are anticipated in the year.
- 18. **Frequency of procurement supervision.** At least two missions a year, at an interval of six months, are envisaged for procurement supervision of the proposed project.
- 19. **Frequency of FM supervision.** The World Bank FM supervision review will be conducted at least once every year based on the risk assessment of the project. The mission's objectives will include ensuring that strong FM systems are maintained for the project throughout its implementation. Reviews will be carried out regularly to ensure that expenditures incurred by the project remain eligible for IBRD funding. An overview of the frequency of desk reviews, on-site visits, and capacity building related to FM is included in Table 1.3.

Table 1.2. Implementation Support Plan

| Timing | Focus of the Implementation Support Activities | Skills Needed | |
|--------|--|--|--|
| Year 1 | Component 1 Finalization of the bidding documents for the seabed investigations Launch of the procurement process and selection of the contractor for the seabed investigations Procurement for the supervision contract of the seabed investigations Implementation of the seabed investigations Component 2 Procurement of the institutional, legal, and financial advisory Procurement of the preparatory technical studies for the connection of the BSSC to Georgia's domestic high-voltage grid Procurement of the E&S instruments for the submarine cable system and the on-land OHLs Procurement and implementation of the security study Support for stakeholder engagement | Engineering (with a focus on seabed investigations, submarine cable technology, OHL routing, and design) FM Procurement E&S Public communication support specialist Gender specialist | |
| | Project-wide | | |
| | Compliance with fiduciary and E&S requirements by GSE | | |
| | Coordination with the MoESD and policy dialogue | | |

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| Timing | Focus of the Implementation Support Activities | | Skills Needed |
|-----------|--|---|---|
| Years 2–4 | • Support for identification of conclusions of the seabed studies to be fed | • | Engineering (with a focus on seabed investigations, |
| | into the negotiations for the BSSC Project | | submarine cable technology, OHL routing, |
| | Component 2 | | and design) |
| | Development of the preparatory technical studies for the connection of | • | FM |
| | the BSSC to Georgia's domestic high-voltage grid | • | Procurement |
| | Development of the E&S instruments for the submarine cable system | • | E&S |
| | and the on-land OHLs | • | Public communication |
| | Ad hoc institutional, legal, and financial advisory | | support specialist |
| | Support for stakeholder engagement | • | Gender specialist |
| | Project-wide | | |
| | Compliance with fiduciary and E&S requirements by GSE | | |
| | Coordination with the MoESD and policy dialogue | | |

Table 1.3. Overview of Frequency of Desk Reviews, On-Site Visits, and Capacity Building

| Activity | Frequency |
|--|--------------------------|
| Desk reviews | |
| IFRs review | Quarterly |
| Audit report review | Annually |
| Review of other relevant information such as internal audit reports | Quarterly |
| On-site visits | |
| Review of the overall operation of the FM system | Annually during |
| | implementation support |
| | missions |
| Monitoring of actions taken on issues highlighted in audit reports, auditors' Management | Continuous |
| Letters, and internal audit and other reports | |
| In-depth transaction reviews | As required |
| Capacity building | |
| FM training | Before project start and |
| | thereafter annually |
| TA | Continuous |

20. A more detailed breakdown of task team skills and estimated effort needed for implementation support is shown in Table 1.4.

Table 1.4. Task Team Skills Mix Required for Implementation Support

| Skills Needed | Estimated Number of Staff Weeks per Year | Estimated Number of Trips per year | Comments |
|-------------------------------------|---|------------------------------------|-------------|
| Project management (task team lead) | 10 | 3–4 | EU based |
| Project management (co-team leads) | 5 | 3–4 | Field based |
| Procurement | 3 | 2 | Field based |
| FM | 3 | 2 | Field based |
| Environmental | 3 | 2 | Field based |

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| Skills Needed | Estimated Number of Staff Weeks per Year | Estimated Number of Trips per year | Comments |
|---------------------------------------|---|------------------------------------|--------------------|
| Social | 3 | 2 | Field based |
| Gender | 2 | 1 | Field based |
| Technical consultants (2–3 engineers) | 5 | _ | Remote |
| Administrative support | 3 | _ | HQ and field based |

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ANNEX 2: BSSC Implementation Readiness

1. Phase 1 of the program aims to enhance the implementation readiness of the BSSC Project, which will require undertaking several actions on the technical, institutional, legal, and commercial sides. The BSSC Project can be considered ready for implementation and bankable only once (a) the technical design (including the E&S aspects) is finalized, (b) institutional mechanisms are in place that ensure effective coordination among sponsor countries, (c) legal issues related to the installation of a submarine cable system under the Black Sea and the alignment with ENTSO-E and EU regulations are resolved, and (d) an agreement on the structuring and financing of the project is reached and an operational project company is in place. Phase 1 of the program will support activities across all these dimensions, by financing the geophysical and geotechnical investigations of the Black Sea seabed under Component 1 and a wide range of TA activities under Component 2. A detailed list of the actions required to achieve the PDO of Phase 1 and enhance the implementation readiness of the BSSC Project (together with a road map toward their completion) is included in Table 2.1.

Table 2.1. Actions Required to Achieve the PDO and Enhance Implementation Readiness of the BSSC Project

| Action Type | Action | Road Map toward Completion | |
|-------------|--|---|--|
| Technical | Complete the feasibility study, including the technical design, economic and financial analyses, E&S scoping report, and bidding documents for the BSSC Project. | be completed by July 2024. | |
| | | The scope of work for the studies (including the areas to be surveyed, the type of data to be acquired, and the characteristics of the required equipment and vessels) has been finalized. The tender is expected to be launched in mid-2024, together with the supervision contract and capacity building for GSE. Supported by Component 1 of Phase 1. | |
| | · · · · · · · · · · · · · · · · · · · | The ongoing feasibility study includes the preparation of the technical documentation and an E&S scoping report. The detailed E&S documentation (including the ESIA) will be developed starting in early 2024. Supported by Component 2 of Phase 1. | |
| | Prepare the technical, environmental, and social documentation for the OHLs in Georgia and Romania. | The ongoing feasibility study includes an E&S scoping report. The | |
| | Assess the security risks and adopt mitigation measures. | The assessment will be carried out when the seabed studies are completed and could be repeated as needed depending on the evolving security conditions. Supported by Component 2 of Phase 1. | |

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| Action Type | Action | Road Map toward Completion |
|---------------|--|--|
| Institutional | · | The Government of Georgia will be establishing the IWG in 2024, but it will need TA in operationalizing it and supporting its decision-making. Supported by Component 2 of Phase 1. |
| | intergovernmental institutions with the | Intergovernmental institutions are being established under the international agreement signed by Georgia, Azerbaijan, Romania, and Hungary in December 2022 to ensure coordination on the BSSC Project. The Georgian IWG will coordinate Georgia's inputs to the intergovernmental institutions. |
| | | Support to Georgia by Component 2 of Phase 1. Parallel World Bank engagement with the other countries involved. |
| Legal | Resolve the legal issues related to the Bucharest Convention and UNCLOS. | Obligations toward Bulgaria and Türkiye under the UNCLOS and toward the signatories of the Black Sea Commission under the Bucharest Convention are being assessed under the feasibility study to identify actions required during project preparation. |
| | | Support to Georgia's actions toward achievement of these milestones under Component 2 of Phase 1. |
| | power sectors with EU and ENTSO-E regulations to ensure optimal cable | 2024, reflecting the countries' obligations and/or aspirations for alignment with the EU Electricity Market Directives and other relevant |
| | utilization. | Supported by Component 2 of Phase 1 and the World Bank's engagement with Georgia, Azerbaijan, and Armenia. |
| | = | The BSSC Project was included in the ENTSO-E TYNDP 2022 as a project under study. Transelectrica and GSE are expected to submit it to the TYNDP 2024 as a planned project. Completion of the feasibility study is a prerequisite to achieve PMI/PCI status. |
| | | Support to Georgia's actions toward achievement of these milestones under Component 2 of Phase 1. Parallel World Bank engagement with the other participating South Caucasus countries. |
| Financial | Establish a pre-investment-stage project company for the implementation of the BSSC Project. | An MoU was signed in July 2023 by Georgia, Azerbaijan, Romania, and Hungary to form a pre-investment JV for the preparation of the BSSC Project, but the company still needs to be fully operationalized. |
| | | Support to Georgia's actions toward achievement of these milestones under Component 2 of Phase 1 |
| | sponsors on the structuring and financing | Negotiations will start in earnest in mid-2024. The Georgian IWG will coordinate Georgia's inputs to the negotiations. |
| | of the BSSC Project. | Support to Georgia's actions towards achievement of these milestones under Component 2 of Phase 1. |

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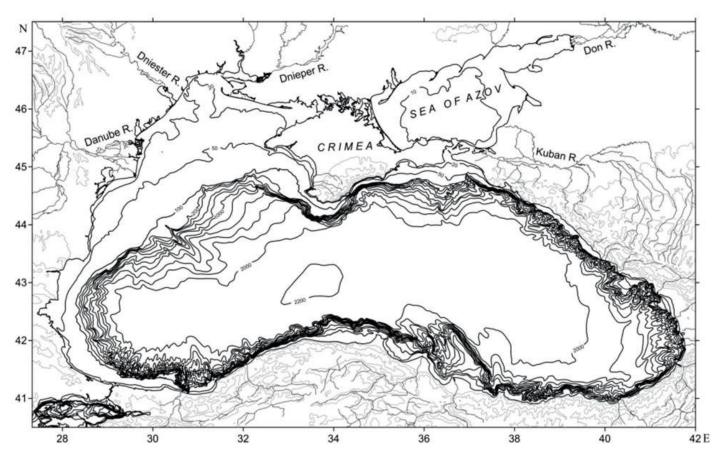
Enhancing Energy Security through Power Interconnection and Renewable Energy Program (P179950)

| Action Type | Action | Road Map toward Completion | |
|-------------|----------------------------------|---|--|
| | | Based on the agreement reached among project sponsors, a project company will be established to implement the project (expected not before early 2025). | |
| | | Support to Georgia's actions toward achievement of these milestones under Component 2 of Phase 1. | |
| | Make an FID on the BSSC Project. | Once the negotiations are concluded and an investment-stage project company is formed, an FID to proceed with the project can be made (expected not before early 2025). | |
| | | Support to Georgia's actions toward achievement of these milestones under Component 2 of Phase 1. | |

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ANNEX 3: Maps

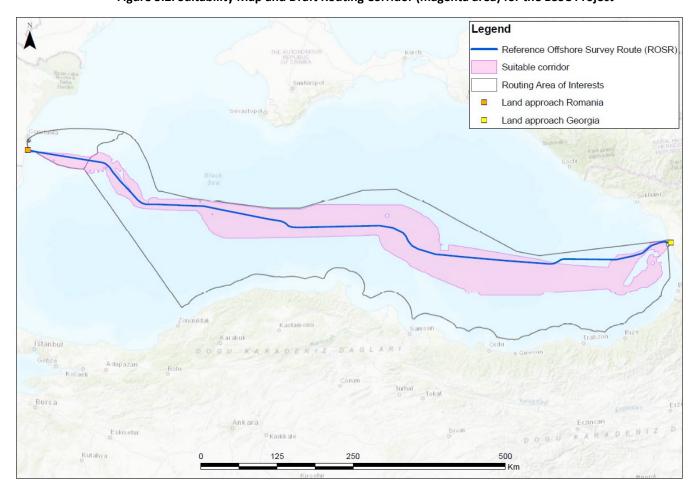
Figure 3.1. Topographic Map of the Black Sea Showing Water Depths in meters



Source: GSE.

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Figure 3.2. Suitability Map and Draft Routing Corridor (magenta area) for the BSSC Project



Source: GSE.

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POWER SUPPLY OF GEORGIA TEN YEAR NETWORK DEVELOPMENT PLAN OF GEORGIA 2022-2032 **RUSSIA** BLACK SEA LEGEND 500kV Substatio TBILISI ... 110kV Substatio Wind Power Plant Planned Wind Power Plan Thermal Power Plant of Combined Cycle GT Planned Thermal Power Combined Cycle GT HVDC Back-to-Back Sta 500kV HV Line Planned or Non-F 500kV HV Line 220kV HV Line entso Planned or Non-F 220kV HV Line TÜRKIYE 110kV HV Line --- Planned 110kV HV Line AGSTAPA 400kV HV Line --- Planned 400kV HV Line ARMENIA 330kV HV Line
Planned 330kV HV Line **AZERBAIJAN**

Figure 3.3. Georgia's Power Transmission Grid

Source: GSE's 2022 TYNDP.

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ANNEX 4: Team Members

| Team Member Name | Title | Unit | Role |
|------------------------|--|-------|---------------------------------|
| Joern Huenteler | Senior Energy Specialist | IECE1 | Team Leader |
| Abdulaziz Faghi | Program Leader | IECDR | Team Leader |
| Tural Jamalov | Senior Financial Management Specialist | EECG1 | Financial Management Specialist |
| Sepehr Fotovat Ahmadi | Senior Procurement Specialist | EECRU | Procurement Specialist |
| Darejan Kapanadze | Senior Environmental Specialist | SCAEN | Environmental Specialist |
| David Jijelava | Social Development Specialist | SCASO | Social Development Specialist |
| Mei Wang | Senior Counsel | LEGLE | Counsel |
| Alkadevi Morarji Patel | Senior Social Development Specialist | SCASO | Team Member |
| Christina Leb | Senior Counsel | LEGEN | Team Member |
| Claudio Protano | Energy Specialist | IECE1 | Team Member |
| David Loew | Senior Energy Economist | IEEGK | Team Member |
| Duygu Cicek | Counsel | LEGEN | Team Member |
| Elcin Akcura | Senior Energy Economist | IEEGK | Team Member |
| Florian Kitt | Senior Energy Specialist | IECE1 | Team Member |
| Gazmend Daci | Senior Energy Specialist | IECE1 | Team Member |
| Himmat Singh Sandhu | Digital Development Specialist | IDD01 | Team Member |
| Irma Gegechkori | Senior External Affairs Officer | ECREX | Team Member |
| Jyldyz Beknazarova | Operations Officer | ECADE | Team Member |
| Ketevan Chitashvili | Program Assistant | ECCGE | Team Member |
| Koji Nishida | Senior Energy Specialist | IECE1 | Team Member |
| Leyla Sattler | Consultant | SCAEN | Team Member |
| Lusine Asatryan | Financial Management Specialist | EECG1 | Team Member |
| Nikolozi Chantladze | Procurement Specialist | EECRU | Team Member |
| Rafael De Sa Ferreira | Senior Energy Economist | IAEE1 | Team Member |
| Reidar Lien | Consultant | IECE1 | Team Member |
| Rhedon Begolli | Senior Energy Specialist | IECE1 | Team Member |
| Teona Elizarashvili | Consultant | IECE1 | Team Member |
| Tiko Zurabishvili | Consultant | ECCGE | Team Member |
| Wazhma Khalili Raheem | Program Assistant | IECE1 | Team Member |

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