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Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 28-Feb-2024 | Report No: PIDA0254



BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies)	Region	Operation ID	Operation Name
Georgia, Georgia	EUROPE AND CENTRAL ASIA	P179950	Enhancing Energy Security through Power Interconnection and Renewable Energy Program
Financing Instrument	Estimated Appraisal Date	Estimated Approval Date	Practice Area (Lead)
Investment Project Financing (IPF)	16-Feb-2024	30-Apr-2024	Energy & Extractives
Borrower(s)	Implementing Agency		
Georgia	Georgian State Electrosystem		

Proposed Development Objective(s)

Enhance the implementation readiness of the Black Sea Submarine Cable Project.

Components

Geophysical and geotechnical investigations of the Black Sea seabed
Legal and financial advisory and technical assistance

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

Environmental And Social Risk Classification

High

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and 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 proposed 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, Hungary, Azerbaijan, Armenia, and potentially other countries in the region are expected 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.

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 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 by 2032 (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.

Regional Power and Digital Sector Context

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).² 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

¹ The PCE is expected in Phase 3.

² Source: IEA.



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. 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.

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.

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 dedicated international connectivity gateway for all internet service providers 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. 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 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.

The Black Sea Submarine Cable (BSSC) Project

11. **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 the latest estimates, 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.



12. **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, with an economic net present value (ENPV) of US\$5.6 billion and an economic internal rate of return (EIRR) of 20 percent in the base case.⁴ 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 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.

13. **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 Electricity Supply Reliability and Financial Recovery Project (P169117).** The scope of the feasibility study, which began in May 2022, includes the preparation of the following: (i) power system studies and estimation of optimal interconnection capacity; (ii) technical design and project definition; (iii) economic and financial analysis; (iv) commercial framework and operational business model; (v) financing strategy and options; and (vi) implementation plan, procurement strategy, and bidding documents.

14. **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.

15. **The EU has taken a keen interest in the BSSC Project, and an agreement that expresses the intent to cooperate 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.⁵ 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

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.

⁴ Without the fiber-optic cable, the power interconnection alone was estimated to have an ENPV of US\$3.4 billion and an EIRR of 15 percent in the base case.

⁵ 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.



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.

16. **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, government stakeholders, and international partners.** Given the high level of complexity of the Project, the IWG will play a key role in enhancing governance, decision-making, and accountability for its preparation and implementation, including related to technical, legal, operational, commercial, and diplomatic issues. The main functions the IWG should take on include: (i) governance, policy, and security advisory, (ii) strategic communication, and (iii) facilitation of technical and legal coordination.

The ESIPIRE MPA Program

17. **The ESIPIRE MPA Program will be structured with partially overlapping phases supporting a known and clearly delineated overall Program scope.** The Program Development Objective (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. A description of the activities expected in each phase is summarized below:

- a. **Phase 1: Preparatory activities for the BSSC project including technical assistance 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.
- 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, 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 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 integration⁶ 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

⁶ 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.



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.

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 overall cost estimate for the financing needs for Phase 3 (the submarine cable infrastructure and the two associated converter stations) is US\$3.2 billion. 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.

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.

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

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, reliant on tourism, experienced one of the largest gross domestic product (GDP) drops in Europe and Central Asia, with a 6.8 percent contraction in 2020. However, since then, the economy has recovered strongly. In 2021, the economy rebounded (10.4 percent growth), driven by the recovery of consumption and exports, and GDP surpassed its 2019 level. Like the other economies in the region, Georgia has benefited from large inflows of money transfers and people in the aftermath of Russia’s invasion of Ukraine, with growth averaging 10.1 percent in 2022. However, Georgia’s economic performance could be affected by inflation, global uncertainty, and unresolved structural constraints.⁷

⁷ World Bank. 2022. *Georgia Country Economic Memorandum: Charting Georgia’s Future*. Washington, DC.



19. **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 total electricity generation in Georgia comes from hydropower plants, which allow 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 p.a. 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).

20. **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 communautaire*⁸ 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).

21. **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).

22. **In 2020, the Government adopted the concept of a new wholesale electricity market, with the launch of the day-ahead market 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.

23. **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

⁸ 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>.



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. Proposed Development Objective (Phase 1)

Development Objective

Enhance the implementation readiness of the Black Sea Submarine Cable Project.

Key Results

24. The PDO-level outcome indicators of Phase 1 include:

- 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).

E. Project Description (Phase 1)

Component 1: Geophysical and geotechnical surveys of the Black Sea seabed (US\$30 million)

25. **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.

Component 2: Legal and financial advisory and technical assistance (US\$5 million)

26. **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,⁹ obligations under the United Nations Convention on the Law of the Sea (UNCLOS) and the Bucharest Convention,¹⁰ 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.**¹¹ 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 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.

⁹ 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.

¹⁰ 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.

¹¹ 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.



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

Summary of Screening of Environmental and Social Risks and Impacts

F. Summary of Screening of Environmental and Social Risks and Impacts (Phase 1)

27. **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.

28. **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 the ESPIRE Program at present. However, it is part of the scope of the ESIA that will be undertaken during Phase 1. During preparation of Phase 2, the World Bank will assess whether the OHL in Romania or any other non-IBRD-financed infrastructure in Phase 2 meets the criteria of associated facilities under the ESF and will treat them accordingly.

29. **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.

30. **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.

31. **To understand and manage the risks and impacts of the Phase 1 project activities, the following documents will be prepared before appraisal:** (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) draft Labor Management Procedures; (c) draft Stakeholder Engagement Plan (SEP), including grievance redress mechanism; and (d) draft Environmental and Social Commitment Plan—all to be disclosed and consulted with stakeholders. 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.

G. Institutional and Implementation Arrangements (Phase 1)

32. **Phase 1 of the ESPIRE MPA Program will be implemented by GSE.** 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 and will involve other units and departments (for example, 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) as needed. The Ministry of Economy and Sustainable Development (MoESD) will facilitate and support project implementation as needed in its capacity as the line Ministry responsible for overseeing energy policy in Georgia.

33. **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.



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