



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 13-Jun-2024 | Report No: PIDDC00718



BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies) Moldova, Montenegro, Montenegro	Operation ID P505964	Operation Name Energy Sector Decarbonization Project	
Region EUROPE AND CENTRAL ASIA	Estimated Appraisal Date 10-Oct-2024	Estimated Approval Date 12-Dec-2024	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing (IPF)	Borrower(s) Montenegro	Implementing Agency Crnogorski Elektrodistributivni Sistem (CEDIS), Ministry of Energy and Mining (MoEM)	

Proposed Development Objective(s)

Improve energy efficiency of public buildings and enhance operational efficiency of the electricity distribution grid in Montenegro.

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)?	Yes

SUMMARY

Total Operation Cost	50.20
Total Financing	50.20
of which IBRD/IDA	30.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	30.00
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Non-World Bank Group Financing

Counterpart Funding	2.70
Borrower/Recipient	2.70
Other Sources	17.50
OPEC FUND	17.50

Environmental and Social Risk Classification

Moderate

Concept Review Decision

The review did authorize the preparation to continue

B. Introduction and Context

Country Context

1. **After a historic recession in 2020, Montenegro’s economy has rebounded strongly, driven by tourism recovery and solid private consumption.** In the wake of the pandemic, GDP declined by 15.3 percent in 2020. The economy bounced back swiftly, however, recording 13 percent growth in 2021 and 6.4 percent in 2022 to return to pre-pandemic levels of GDP. Strong growth continued into 2023, when the economy expanded by an estimated 5.5 percent, supported by booming tourism and an influx of foreigners, primarily Russian and Ukrainian citizens, which has supported not only tourism, but also consumption and investment. Investment has stagnated, however, following the completion of the first section of the highway in 2022. The closure of aluminum and steel plants has reduced industrial production and merchandise imports, although the decline has been mitigated somewhat by exports of surplus electricity.

2. **The growth outlook is positive but challenged by an unfavorable global setting.** Growth is expected to moderate to 3.4 percent in 2024, driven by tourism and private consumption, with investment in tourism and energy sectors making a slight positive impact. The possibility of large public investments and airport concessions could further boost growth, despite limited fiscal space. Inflation should slow to 3.8 percent in 2024, with net foreign direct investment covering the current account deficit, which is expected to remain strong at about 7 percent of GDP during 2024–26.

3. **Montenegro has made ambitious commitments related to the fight against climate change.** Montenegro is particularly vulnerable to the impacts of climate change, especially higher-frequency and higher-intensity floods, landslides, wildfires, droughts, and heat waves.¹ At the same time, the Montenegrin economy is about 70 percent more carbon intensive and about 30 percent more energy intensive than the EU-27 average.² In recent years, the Montenegrin government has started taking action toward climate change adaptation and mitigation. Montenegro ratified the Paris Agreement in 2017 and submitted its updated Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2021, pledging to reduce the country’s greenhouse gas (GHG) emissions excluding the Land Use, Land Use Change, and Forestry (LULUCF) sector by 35 percent by 2030 vs. 1990 levels. As a contracting party to the Energy Community Treaty, Montenegro has made legally binding commitments to adopting core EU energy legislation (the so-called ‘*acquis communautaire*’) and is currently developing its first National Energy and

¹ Assessed using the World Bank’s *ThinkHazard!* and Climate and Disaster Risk Screening tools.

² IEA, World Indicators and IEA, Indicators for CO2 Emissions (2022).



Climate Plan (NECP), which must be consistent with the target to reduce GHG emissions (including LULUCF) by 55 percent by 2030 vs. 1990 levels set forth in the Clean Energy Package adopted by the Energy Community in December 2022. Moreover, as a signatory to the 2020 Sofia Declaration on the Green Agenda for the Western Balkans, aligned with the European Union's (EU) Green Deal, Montenegro has committed to working toward the 2050 target of a carbon-neutral continent together with the EU. Montenegro is currently developing a new Strategy on Low-Carbon Development and a Carbon Pricing Methodology.

Sectoral and Institutional Context

4. **Energy sector decarbonization is high on the government's climate and development agenda, which is driven by its international climate commitments and obligations, as well as aspirations to join the EU.** The electricity and heating sectors will need to play a major role in decarbonization as they account for about 40 percent of the country's GHG emissions. Decarbonization of these sectors will require replacing fossil fuel based generation sources (especially coal) with renewable capacity, upgrading transmission and distribution infrastructure to improve its operational efficiency and integrate variable RE, reduce energy consumption on the demand side through EE, and expanding regional power cooperation and trade. The government is developing a suite of strategies, policies, and legislation to create the enabling environment to achieve the climate goals in the energy sector. These include the abovementioned NECP and amendments to the Law on Energy, both of which are expected to be adopted by September 2024. In addition, the Law on Energy Use from Renewable Sources and the Law on Protection from Negative Impact of Climate Change and Protection of the Ozone Layer are under preparation with the objective of approving them by July 2024.

5. **The electricity sector is dominated by three public utilities.** The largest company – Elektroprivreda Crne Gore (EPCG) – owns and operates about 80 percent of the country's installed generation capacity, and it supplies electricity across the country. Crnogorski Elektroprenosni Sistem (CGES) operates the national electricity transmission system that was spun off from EPCG in 2009, while Crnogorski Elektrodistributivni Sistem (CEDIS), which was unbundled from EPCG in 2016, operates the national distribution grid. The Ministry of Energy and Mining (MoEM) is responsible for sectoral strategies, programs, policies, and oversight, while the sector is regulated by the Energy and Water Regulatory Agency (REGAGEN). An Eco Fund was established in 2018 to finance and provide technical support to projects and programs in the field of the environment, climate change, and energy.

6. **Renewables account for the bulk of installed electricity generation capacity.** Total installed capacity in the country is about 1,085 MW, split between renewables (80 percent, mostly hydro) and thermal power capacity (20 percent). All large power plants – the Piva hydropower plant (HPP) of 342 MW, the Perućica HPP of 307 MW, and the Pljevlja lignite coal plant of 225 MW (the only thermal power plant in the country) – are owned and operated by EPCG. The latter also operates several small hydropower plants totaling 10 MW. The rest of the generation capacity is owned and operated by private sector players, including about 118 MW of wind, 53 MW of small hydro, and 30 MW of solar PV.

7. **Electricity generation capacity of solar PV and wind energy capacity is set to rise manifold through 2040.** In view of the planned phase-out of the coal plant and electricity self-sufficiency objectives, the share of solar PV and wind energy is set to dramatically increase over the next two decades. In support of this policy objective, a Law on Renewable Energy was drafted and is expected to be adopted by July 2024. The law will, among other things, prioritize and enable competitive auctions for renewables to attract private capital while achieving competitive electricity generation costs.

8. **The integration of renewables is one of the main challenges facing the electricity grid.** Both the distribution and transmission grids will need to be upgraded to enable the integration of hundreds of megawatts of solar PV and wind capacity. The distribution grid is already under stress due to the rapidly increasing number of rooftop solar PV systems and the existing mini-hydropower plants, which were not considered at the time of designing and constructing the



distribution system several decades back. In response to these challenges, the electricity distribution company has plans to upgrade distribution infrastructure and phase in smart grid technologies. On the transmission side, the main challenges will stem from the construction of utility-scale variable RE plants and phase out of the Pljevlja coal plant. Measures that are implemented and/or planned by the electricity transmission company include building new power transmission lines, increasing the capacity of substations in locations close to RE generation sites, expanding electricity connections with neighboring power systems, adding storage and balancing services, and implementing modern asset management solutions.

9. **The EE potential in the buildings sector remains largely untapped.** In the past decade Montenegro reduced energy consumption per unit of GDP mostly through restructuring of its economy, namely by phasing out heavy industry. At the same time, buildings, which account for nearly half of the final energy consumption, still have a large untapped potential for EE improvements. Non-residential buildings, including commercial and public sector buildings, account for about 40 percent of the final energy consumed in the building sector. Based on the outcomes of EE projects implemented in Montenegro in the past 15 years, energy consumption in buildings can be reduced by more than 30 percent through standard EE measures such as window replacement, wall and roof insulation, and making the heating and cooling system more efficient.

10. **EE improvements in public buildings face financial, policy, technical, and information barriers.** The main issues facing EE investments include: (i) a lack of access to commercial financing due to restrictions on public borrowing and limited creditworthiness; (ii) a reluctance of commercial banks to lend for EE investments in public buildings due to the lack of familiarity with financial and technical issues associated with these EE investments, and perceived high risk and high transaction costs of EE; (iii) the absence of private sector investors, such as Energy Service Companies (ESCOs), with adequate balance sheets to pre-finance EE projects; (iv) public procurement rules requiring tenders to be evaluated purely on the basis of the lowest upfront costs, as opposed to considering the net present value of investments; (v) the limited number and capacity of energy service providers, especially ESCOs, to provide turnkey EE services and use performance-based contracting options in the public sector; (vi) gaps in the regulatory framework related to building energy performance certificates; and (vii) a lack of reliable data on EE indicators (e.g., buildings stock database), insufficient awareness of financial and technical aspects of EE, as well as behavioral inertia.

Relationship to CPF

11. **The proposed project is designed to contribute to the objectives of the Country Partnership Framework (CPF) for FY25-29 currently under preparation (approval expected on July 16, 2024) and the “Energy Transition, Efficiency and Access” Global Challenge Program.** In particular, the project is aligned with CPF High-Level Objective 2 (“Improved environmental outcomes”) and Objective 2.2 (“Strengthened adaptation to climate change impacts and an accelerated low-carbon transition”) as it will improve the energy efficiency of public buildings and enable the integration of increased RE capacity into the power grid. The proposed project also contributes to the Energy Efficiency and Energy Transition components of the “Energy Transition, Efficiency and Access” Global Challenge Program.

C. Proposed Development Objective

Improve energy efficiency of public buildings and enhance operational efficiency of the electricity distribution grid in Montenegro.

Key Results



12. **Progress towards the Project Development Objective (PDO) will be measured through the following PDO-level indicators:** (i) Projected lifetime energy or fuel savings (GWh); and (ii) Projected lifetime net greenhouse gas (GHG) emissions from results achieved (MtCO₂e).

D. Concept Description

13. **The proposed project would be structured around two substance components and one technical assistance and implementation support component:** (i) Component 1: Improving Energy Efficiency of National University Buildings (estimated cost: €20 million), (ii) Component 2: Enhancing Operational Efficiency of the Electricity Distribution Grid (estimated cost: €25 million), and (iii) Component 3: Technical Assistance and Project Implementation Support (estimated cost: €2 million).

14. **Component 1 aims to improve the energy efficiency of select buildings of the National University located in several cities of Montenegro and support the operationalization of a sustainable financing mechanism for EE in public buildings.** It will build on the success of and lessons learned from the ongoing energy efficiency project for health facilities financed by the World Bank (MEEP2), which will close in June 2025. The energy efficiency investments supported under the project will include the replacement of windows, the insulation of walls and roofs, the replacement and upgrade of heating and cooling systems, the installation of rooftop solar PV systems, lighting upgrades, and a limited amount of reconstruction work. The project will support the operationalization of the budget capture scheme, introduced under the ongoing Montenegro Energy Efficiency Project # 2 and the transition towards more sustainable financing for EE.

15. **Component 2 aims to help the national distribution grid operator CEDIS reduce electricity losses and improve operational efficiency.** The distribution grid has been under growing stress due to the rapid increase in rooftop solar PV. The component will finance the replacement of power distribution transformers and switchgear retrofits to reduce technical losses and the duration and incidence of outages, provide better voltage regulation, and allow for increased power flows stemming from renewables. It will also help CEDIS with respect to advanced metering infrastructure, distribution automation, grid monitoring and control performance of the grid, data analytics and decision support, and cybersecurity.

Legal Operational Policies

	Triggered?	
	Last approved	Current
Projects on International Waterways OP 7.50	No	
Projects in Disputed Area OP 7.60	No	

Summary of Screening of Environmental and Social Risks and Impacts

16. **The project poses a moderate environmental and social risk, primarily due to small-scale renovations and installations in existing publicly owned buildings/sites, which could raise safety and accessibility concerns, especially for individuals with disabilities or limited mobility.** Mitigation measures, enforced through site-specific Environmental



and Social Management Plans (ESMPs), will ensure adherence to Occupational Safety and Health (OSH) standards and universal design principles. A gender-responsive grievance redress mechanism (GRM) will be established at the project level and locally implemented, particularly in university buildings with a significant female population. The project also entails occupational and community health and safety risks (such as exposure to dust, noise, and physical and chemical hazards), which will be addressed through safety measures listed in site-specific ESMPs. Stakeholder engagement and transparent information disclosure will be facilitated through a Project level Stakeholder Engagement Plan (SEP). Overall, the project risks are deemed temporary, predictable, and reversible, managed through standard mitigation measures to be outlined in the SEP and the Environmental and Social Management Framework (ESMF) and enforced through an Environmental and Social Commitment Plan (ESCP).

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APPROVAL

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