



# Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

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Concept Stage | Date Prepared/Updated: 09-Nov-2017 | Report No: PIDISDSC23481



**BASIC INFORMATION**

**A. Basic Project Data**

Country Montenegro	Project ID P165509	Parent Project ID (if any)	Project Name Montenegro Second Energy Efficiency Project (P165509)
Region EUROPE AND CENTRAL ASIA	Estimated Appraisal Date Apr 23, 2018	Estimated Board Date Jun 04, 2018	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) Montenegro	Implementing Agency Ministry of Health, Ministry of Economy	

**Proposed Development Objective(s)**

The development objective is to improve energy efficiency in health sector buildings, and to develop and demonstrate a revolving financing model.

**Financing (in USD Million)**

**SUMMARY**

<b>Total Project Cost</b>	9.37
<b>Total Financing</b>	9.37
<b>Financing Gap</b>	0.00

**DETAILS**

<b>Total World Bank Group Financing</b>	7.40
World Bank Lending	7.40
<b>Total Government Contribution</b>	1.97

Environmental Assessment Category  
B-Partial Assessment

Concept Review Decision  
Track II-The review did authorize the preparation to continue



Other Decision (as needed)

## B. Introduction and Context

### Country Context

1. Montenegro is a small<sup>1</sup> middle income country with a gross domestic product per capita of US\$6,701 in 2016. Before the 2008 global financial crisis, its economy grew by an average of 5 percent per year between 2000 and 2008, and peaked at 10.7 percent in 2007. The growth was driven by high capital inflows and government spending which reached 51 percent of the GDP in 2008. Despite the associated large external debt to GDP ratio of 106 percent and high current account deficit, the poverty rate fell from 11.3 percent to 4.9 percent by 2008. However, the 2008 global financial crisis severely affected the country, and the Montenegrin economy contracted by an average of 3 percent per year between 2009 and 2012, and unemployment for unskilled labor fell by 40 percent. Overall, this limited the effects of the poverty reduction efforts. The economy has moderately rebounded due to a boost in public investment, and it is expected to grow at an average of 3 percent per year by 2022.<sup>2</sup>

2. The country's development objective is to achieve smart, sustainable, and inclusive growth. The development objective and plan are outlined in the Montenegro Development Directions (MDD) 2015-2018, Economic Reform Program 2017-2019 (ERP), and the Montenegro European Union (EU) Accession Program 2014-17. The MDD identifies tourism, energy, agriculture and rural development as key sectors to drive economic growth, the ERP identifies structural reform priorities, and the Montenegro EU accession program focuses on measures necessary to align with the *acquis communautaire* for European integration. The country was granted the status of an EU candidate country in November 2010, negotiations for EU membership were initiated in June 2012, and the country aims to join the EU by 2020. The Bank's support to Montenegro is aligned with its EU accession and integration process with a focus on areas that contribute to eradicating poverty and improving shared prosperity.

### Sectoral and Institutional Context

3. Montenegro's power sector is dominated by lignite and hydro, accounting for 50.3 percent and 49.7 percent of gross generation, respectively. Most generation assets were commissioned 26-30 years ago, and are deteriorating due to their age combined with limited investments in rehabilitation and maintenance. About one third of Montenegro's power needs is covered through imports, mainly from Serbia and the Czech Republic. Given the absence of a district heating system in the country, the heating sector is characterized by the use of individual heating systems (e.g. building-level heat-only-boilers or individual heating technologies) fueled by biomass (69 percent of heat produced), electricity (28 percent) or coal and light fuel oil (1-2 percent). Heat-only-boilers installed in public buildings are estimated to account for approximately one-fifth of the heat production in the country.<sup>3</sup>

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<sup>1</sup> Montenegro has a population of 624,000.

<sup>2</sup> International Monetary Fund, October 2017, World Economic Outlook, Seeking Sustainable Growth, Short-term recovery, long-term challenges.

<sup>3</sup> World Bank (forthcoming), Western Balkans: Directions for the Energy Sector. World Bank (forthcoming), Biomass Based Heating in the Western-Balkans: A Roadmap for Sustainable Development.



4. Montenegro's demand for energy is increasing. According to the latest available data, the total final energy consumption increased by 8 percent from 656 ktoe in 2014 to 710 ktoe in 2015, and is projected to increase by about 3 percent per year over the next two decades.<sup>4</sup> The buildings sector is the largest energy consumer in the country, accounting for more than 40 percent<sup>5</sup> of final energy consumption, followed by transport at 29 percent and the industrial sector at 19 percent.<sup>6</sup> Without investments to rehabilitate the existing buildings stock, energy consumption in residential and non-residential buildings is likely to further increase in the future. At 175 kWh/square meter,<sup>7</sup> specific energy consumption in non-residential buildings in Montenegro – many of which are under-heated – is already approaching some EU countries in colder climates, such as Denmark, whose non-residential consumption is about 200 kWh/square meter. Similarly, while the energy consumption per capita is currently less than half of the EU's 3.45 toe/capita, it is estimated to increase in the future as penetration of appliances and comfort levels approach EU levels. Key reasons for the high energy use in the buildings sector include generally poor insulation, dated heating and lighting systems, years of under-maintenance, and insufficient incentives to save energy (see paragraph 7).

5. The overall energy intensity of the Montenegrin economy (0.250 toe/thousand 2005 US\$) is about three times that of the EU28 average (0.08 toe/thousand 2005 US\$). Buildings are a major contributing factor given their high total and specific energy consumption. Improving energy efficiency (EE) in buildings can help reduce energy consumption while improving comfort levels, reducing expenditures on energy and decreasing greenhouse gas emissions. Of particular note are the high energy savings potential and related social co-benefits for public buildings, as demonstrated through the ongoing World Bank-supported Montenegro Energy Efficiency Project (MEEP) (P107992) and its Additional Financing (P145399). Specifically, the energy consumption and related greenhouse gas emissions in the 20 retrofitted public buildings to date were cost-effectively reduced by 40-50 percent, which generated annual energy cost savings of around €600,000 per year, and helped to improve satisfaction levels of end-users (e.g. children, sick people, teachers and doctors) by more than 40 percent.

6. The Government recognizes the potential to reduce energy consumption in the buildings sector, and EE is a cornerstone of its Energy Development Policy by 2030, and the Energy Development Strategy by 2030. In line with its Energy Community Treaty obligations, the Government adopted as part of its National EE Action Plans (NEEAPs) a target to reduce final energy consumption by 9 percent by 2018 (with 2010 as baseline). The current NEEAP anticipates that 83 percent of the total energy savings have to come from the buildings sector. To achieve the EE target, the Government has initiated a range of actions, including: (i) strengthening of the legislative and regulatory framework for EE by transposing the relevant EU directives and adopting related secondary legislation; (ii) providing financial assistance to households for the installation of solar water heaters and efficient biomass-based heating systems;<sup>8</sup> and (iii) improving EE in public buildings with the support of MEEP, which provided a €11.5 million loan to finance EE retrofits in a total of 25 educational and health facilities, and the support of a €34.5 million KfW loan and grant, expected to improve EE in 28

<sup>4</sup> World Bank, June 2014, Western Balkans: Scaling Up Energy Efficiency in Buildings; and latest data from the Energy Community.

<sup>5</sup> The definition of final energy consumption is aligned with the EU Directive 2006/32/EC on energy end-use efficiency and energy services, excluding consumption by the aluminum plant in Podgorica (KAP).

<sup>6</sup> Energy Community Database (accessed October 2017), Montenegro Facts and Figures in Energy Efficiency.

<sup>7</sup> World Bank, June 2014, Western Balkans: Scaling Up Energy Efficiency in Buildings.

<sup>8</sup> The Luxembourg Agency for Development Cooperation and Norwegian Government provided a €130,000 and €390,000 grant, respectively, to support the purchase and installation of modern biomass heating systems under the Energy Wood program. The United Nations Environment Program (UNEP) and the Italian Ministry for the Environment, Land and Sea (IMELS) provided a US\$1million credit line to install solar water heaters in selected Montenegrin households.



schools and social facilities. As of 2015, Montenegro had reduced its final energy consumption by 4 percent, with the buildings sector contributing to 87 percent of the achieved savings.

7. Despite the significant progress in improving EE in buildings in recent years, a number of key technical, economic, institutional, regulatory and financial barriers remain and are impeding EE investments to be implemented at scale. These include:

- *Below cost-recovery tariffs:* At €0.09/kWh for the household sector (and small non-household consumers), and €0.08/kWh for the industrial sector,<sup>9</sup> regulated electricity tariffs are below the estimated cost of service in Montenegro, representing an important disincentive for EE investments and resulting in a substantial quasi-fiscal deficit, which was estimated at around 4 percent of GDP in 2014 (with below-cost-recovery tariffs accounting for the largest component of the revenue shortfall in the power sector).<sup>10</sup>
- *Financial barriers:* Access to affordable financing for EE investments in buildings is limited by a number of factors, including: (i) lack of access to commercial financing by public entities due to existing restrictions on public borrowing, lack of creditworthiness and inability to collateralize loans; (ii) general reluctance of commercial banks to lend for EE in public buildings due to lack of familiarity with financial and technical issues related to EE investments, combined with high perceived risks and transaction costs; (iii) absence of private sector investors, such as energy service companies (ESCOs), with adequate balance sheets to pre-finance EE projects; and (iv) prevalence of under-heating in many buildings, which limits the achievable energy cost savings.
- *Institutional, regulatory and informational barriers:* EE improvement at scale in the public buildings sector is also hampered by a range of regulatory and procedural barriers, including restrictions on the ability of public entities to retain energy cost savings or to conclude multi-year contracts, lack of standardized contracts and protocols, and institutional challenges related to the cross-cutting nature of EE. In addition, the 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 are part of the impediments further constraining EE improvements.

8. In order to address some of the aforementioned key barriers and accelerate the pace of EE building renovations, the third NEEAP (2016-2018) includes a variety of policy, regulatory, informational and capacity buildings measures<sup>11</sup> planned to be implemented in the next two years through the state budget and with the support of other development partners (e.g. EBRD, Energy Community Secretariat and KfW). To scale-up EE financing, the NEEAP also envisages the promotion of ESCOs in the public sector, the continued implementation of pilot projects, and the establishment of supporting financing mechanisms for EE. The proposed project is designed to support the Government's effort in these key market barrier areas by: (i) testing alternative EE financing and simple performance-based contracting models that would help to gradually build local ESCO market capacity and create on-the-ground experience for implementation of these models at a larger scale, including for public entities that are not able to borrow; (ii) helping to address informational barriers through enhanced technical and social monitoring and awareness raising activities; (iii) further strengthening local

<sup>9</sup> Eurostat (accessed October 2017), 2016 Montenegro, Electricity Prices Second Half of the Year (2016). Household annual consumption ranges from 2500kWh to 5000 kWh; and industrial consumption ranges from 500MWh to 2000MWh. There was a 7.6% drop in prices in January 2017 as reported by the national utility, EPCG.

<sup>10</sup> World Bank (forthcoming), Western Balkans; Directions for the Energy Sector.

<sup>11</sup> Including for instance: further improvements of the EE regulatory framework pertaining, energy audits of heating and air conditioning systems, energy performance certificates for buildings, labeling of household appliances, EE criteria in public procurement, establishment of a EE monitoring system for public buildings, development of energy management systems in public sector, information campaigns for EE, technical trainings for energy service companies, etc.).



market capacity to prepare and implement EE projects; and (iv) supporting the establishment of EE financing mechanisms in the long-term through targeted technical assistance. Regarding the latter, the Government is currently working on the establishment of the ECO Fund on the basis of the Declaration on the Environment adopted by the Montenegrin Parliament in January 2015, and the Law on Environment, which broadly defines the functions of the ECO Fund as: “financing the preparation, implementation and development of programs, projects and related activities aimed at conservation, sustainable use, protection and improvement of the environment, energy efficiency and renewable energy.” The United Nations Development Program (UNDP) and the European Commission are providing support to the Government to conceptualize the ECO Fund. The current focus of support provided by the two development partners is on aspects related to financing and implementing activities in the area of environmental protection. The Bank – with the support of the Energy Sector Management Assistance Program (ESMAP) – is complementing this effort by providing technical assistance to support an assessment of EE financing options for the public buildings sector. The proposed project would build on and provide targeted follow-up support to help establish and operationalize the selected EE financing option.

### **Relationship to CPF**

9. The proposed project is well aligned with the FY16-20 Country Partnership Framework as it contributes to Objective 2(d), which targets “Enhanced environmental sustainability.” The proposed project is included in the indicative lending pipeline of the CPF and would directly contribute towards meeting the CPF’s Indicator 12: “Energy savings in targeted public buildings” with a target value of 25 percent by the end of the CPF period. Walk-through energy audits of 20 priority buildings identified for potential financing under MEEP 2 indicate that the average energy savings is even higher. In addition, the proposed project would also contribute to Objective 1(a) of the CPF, which strives for “Improved sustainability and efficiency of public finances” given that EE investments lower the recurrent public energy expenditures for retrofitted buildings.

### **C. Proposed Development Objective(s)**

10. The development objective is to improve energy efficiency in public sector buildings, and support the development of a sustainable energy efficiency financing mechanism

### **Key Results (From PCN)**

11. The key results indicators of the project are:
- Projected lifetime energy savings (MJ), which is a corporate results indicator to capture EE improvements;
  - Piloting of scalable EE contracting or financing; and
  - Prepared design and set-up of a long-term EE financing mechanism for adoption.

### **D. Concept Description**

12. The project is proposed to be financed by a €6 million IBRD loan, and implemented by the Ministry of Economy in close collaboration with the Ministry of Health. To improve EE in public sector buildings and support the development of sustainable EE financing mechanisms, the project would include three components: (i) EE improvements in public sector



buildings; (ii) development of sustainable financing models and strengthening of EE market capacity; and (iii) project implementation support.

13. *Component 1 – EE improvements in public sector buildings:* This component will primarily finance EE investments and related technical services (e.g. energy audits, designs, technical and social monitoring and evaluation before and after building retrofits, etc.) in selected public health sector buildings. These investments will reduce the energy consumption and related costs in selected buildings, improve indoor comfort levels and reduce CO<sub>2</sub> emissions.

14. To be eligible, buildings must meet the following basic eligibility criteria: (i) public ownership; (ii) structural soundness of the buildings; and (iii) absence of plans for closure, downsizing or privatization. The selection of the buildings will be based on the list of 20 priority health care facilities identified by the Government and take into account EE selection criteria. The implementation of EE retrofits will be done in annual batches of 5-8 buildings.

15. Eligible investment measures to be supported under MEEP 2 include rehabilitation works/upgrades to reduce the energy use of the selected buildings, including: retrofits of building envelopes (including façades, windows, roofs, and doors); heating and cooling system upgrades (including fuel switching); lighting; and domestic hot water systems. The specific investment package per building will be selected based on the results of detailed energy audits. Fuel switching options for heating systems (e.g. from fuel oil to biomass) will be considered given the substantial biomass potential in the country, as confirmed in the recent World Bank assessment on biomass-based heating options in the Western Balkan region (Montenegro has the highest per capita potential in the region to sustainably increase the use of woody biomass for heating). A limited amount of funds (up to 10% of the total investment costs) may be made available for additional works to ensure reasonably full renovation or longevity of investments (e.g. painting, replacement of old gutters and down sprouts).

16. Component 1 will also be used to pilot alternative contracting and financing models (e.g. simple performance-based contracts with NPV-based selection; budget capture; co-financing) and support enhanced monitoring and evaluation (M&E) of achieved results by conducting technical and social M&E before and after EE retrofits in a sample of selected buildings. The latter would also include the installation of equipment for the long-term monitoring of energy consumption (e.g. electricity, heat and water meters, temperature sensors and data processors), which complement the Government's current effort (with the support of KfW) in setting-up a centralized energy consumption database. Relevant data (e.g. project beneficiaries and end-user satisfaction levels from social M&E activities) would be disaggregated by gender, to the extent possible.

17. *Component 2 – Development of sustainable financing models and strengthening of the energy efficiency market capacity:* This Component is expected to finance activities for the development of sustainable EE financing mechanism and strengthening market capacity in Montenegro. Specific activities may include the following:

- Development of sustainable financing models: This activity would provide technical assistance to develop financing models that allow to sustain and scale-up EE improvements in Montenegro in the long-term. This would build on the results of the financing options study that is currently being undertaken by the Bank with the support of Energy Sector Management Assistance Program (ESMAP) grant funds. Based on preliminary findings, relevant options are likely to focus on budget capture mechanisms, revolving EE funds, and/or public ESCO. While the ESMAP-supported technical assistance will evaluate different institutional, design and financing options for consideration of the Government, the proposed project would provide follow-up support to develop the details



of the selected option (e.g. development of operational manuals, business plans, etc.). Both the ESMAP-funded options study and the follow-up support provided under the project will be closely coordinated and complementary to the ongoing efforts to establish the ECO Fund under the Ministry of Sustainable Development and Tourism. Given that the preparation of a full-fledged sustainable financing mechanism takes time, the proposed project will also pilot simple financing and contractual models as part of investments supported under Component 1, as described in paragraph 14.

- Capacity building and training activities: The project would also provide capacity building for local energy service providers to further enhance their capacity to prepare and implement EE investments, including through the use of alternative financing and contracting models (e.g. NPV-based selection and performance-based contracting). Technical assistance support may also be provided for other EE activities to support the implementation of the NEEAP (2016-2018).
- Communication and awareness activities: The project may also support communication and public outreach activities to strengthen public awareness of EE, and promote results achieved by the project. The communication and awareness activities would be conducted in a gender-sensitive manner.

18. *Component 3 – Project implementation support:* This subcomponent will finance the effective implementation and management of the project, including PIU staff and project-related operating costs. The PIU will build on the existing staff hired under MEEP and include at least a Project coordinator and a technical expert to review technical documentation, support evaluation of bids, including those submitted as part of the NPV-based procurement, and conduct adequate technical site supervision. A temporary safeguard specialist is likely to be needed for the preparation of safeguard instruments.

## **SAFEGUARDS**

### **A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)**

The project will undertake civil works related to EE measures in 15 to 20 selected public buildings throughout Montenegro. The location of these buildings is not fully known at this stage and is unlikely to be finalized by project appraisal. However, it is expected that no expansion of the footprint will take place. Some of the buildings may have the status of protected cultural heritage, but this is expected to be only in very few cases. The project will not fund activities related to construction of new buildings.

### **B. Borrower's Institutional Capacity for Safeguard Policies**

The Ministry of Economy has almost 10 years of experience in implementing World Bank-funded projects. Currently, it is implementing the Montenegro Energy Efficiency Project (P107992) that includes implementation of EE related civil works and other measures in publicly owned buildings - schools, hospitals and municipal medical centers. The Project Implementation Unit has experience in dealing with environmentally-related issues, and is aware of the current World Bank environmental policies.

### **C. Environmental and Social Safeguards Specialists on the Team**





Satoshi Ishihara, Social Safeguards Specialist  
Nikola Ille, Environmental Safeguards Specialist  
Helene Pfeil, Social Safeguards Specialist

**D. Policies that might apply**

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	Civil works will be undertaken in 15 to 20 public buildings located throughout Montenegro. It is not planned to that the existing footprint of related buildings will be expanded. The complexity of civil works will range from internal plumbing and heating system upgrade/replacement, to major works on facades, roofs, replacement of windows and doors, retrofitting of central heating systems and replacement of boiler houses and fuel storage tanks. Key risks, although not likely to be encountered on more than a few sites, include hazardous material/waste, such as asbestos insulation or crude oil waste in fuel tanks. An ESMF including generic EMP and Environmental Checklist will be prepared for the project before appraisal. The draft ESMF is planned to be disclosed in-country in February 2018. Site-specific EMPs or Environmental Checklist will be prepared during project implementation for each specific building - which will become part of the bidding documents and resulting civil works contracts. No category A-type subprojects nor category A-type activities will be implemented within the project.
Natural Habitats OP/BP 4.04	No	No works will be undertaken in nature protected areas. All buildings are located in urban centers.
Forests OP/BP 4.36	No	No works are to be undertaken in forest areas.
Pest Management OP 4.09	No	N/A
Physical Cultural Resources OP/BP 4.11	Yes	It is expected that few buildings will be under culture heritage protection regime. For these structures an opinion will be obtained from the relevant national institutions, and relevant measures incorporated into the site-specific EMP. In case of earthworks and civil works related to outside fuel storage tanks, a chance find procedure will be included in EMP. The principles for management of physical cultural resources will be incorporated into the ESMF.
Indigenous Peoples OP/BP 4.10	No	N/A



Involuntary Resettlement OP/BP 4.12	No	N/A
Safety of Dams OP/BP 4.37	No	N/A
Projects on International Waterways OP/BP 7.50	No	N/A
Projects in Disputed Areas OP/BP 7.60	No	N/A

### **E. Safeguard Preparation Plan**

Tentative target date for preparing the Appraisal Stage PID/ISDS

Feb 15, 2018

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

Preparation of the ESMF is expected to start in late November 2017. Completion of the draft ESMF (for start of public disclosure) is expected by February 1, 2018. Completion of public disclosure in-country is expected by February 2, 2018. The draft ESMF will be consulted with relevant stakeholders, including (but not limited to) potential beneficiary institutions, municipalities, municipal infrastructure companies, regional culture and nature protection institutes, Ministry of Health, local and national NGOs as well as the general public - hard copies of the draft ESMF will be made available at least on 5 locations throughout the country. The location will be noted in the appraisal-stage ISDS.

### **CONTACT POINT**

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**APPROVAL**

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