Document of

The World Bank

FOR OFFICIAL USE ONLY

Report No: PAD2663

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF EUR 6 MILLION
(US$ 7.39 MILLION EQUIVALENT)

TO

MONTENEGRO

FOR A

SECOND ENERGY EFFICIENCY PROJECT

May 11, 2018

Energy & Extractives Global Practice
Europe And Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective March 31, 2018)

Currency Unit =	Euro (€)
€0.8110 =	US$1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Cyril E Muller
Country Director:	Linda Van Gelder
Senior Global Practice Director:	Riccardo Puliti
Practice Manager:	Sameer Shukla
Task Team Leader(s):	Pedzisayi Makumbe, Kathrin Hofer

ABBREVIATIONS AND ACRONYMS

AWP	Annual Work Program
CO2	carbon dioxide
CPF	Country Partnership Framework
DFIL	Disbursement and Financial Information Letter
EBRD	European Bank of Reconstruction and Development
EC	Energy Community
ECA	European and Central Asia
EE	Energy Efficiency
EEPPB	Energy Efficiency Programme in Public Buildings
EIRR	Economic Internal Rate of Return
EMP	Environmental Management Plan
ERP	Economic Reform Program
ESCO	Energy Service Company
ESMAP	Energy Sector Management Assistance Program
ESMF	Environmental and Social Management Framework
ESMP	Environment and Social Management Plan
EU	European Union
FBS	Fixed Budget Selection
FDI	Foreign Direct Investments
FIRR	Financial Internal Rate of Return
FM	Financial Management
GDP	Gross Domestic Product
GH	General Hospital
GHG	greenhouse gas
GNI	Gross National Income
GPN	General Procurement Notice
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GWh	giga watt hours
IBRD	International Bank for Reconstruction and Development
ICT	Information and Communication Technologies
IDA	International Development Association
IFR	Interim Unaudited Financial Reports
IMELS	Italian Ministry for the Environment, Land and Sea
IPA II	Instrument for Pre-accession Assistance II
IPF	Investment Project Financing
ISP	Implementation Support Plan
ktoe	kilo tons of oil equivalent
LCS	Least-Cost Selection
M&E	Monitoring and Evaluation

M&V	Monitoring and Verification
MDD	Montenegro Development Directions
MEEP	Montenegro Energy Efficiency Project
MEEP2	Montenegro Second Energy Efficiency Project
MoE	Ministry of Economy
MoF	Ministry of Finance
MoH	Ministry of Health
MoU	Memorandum of Understanding
NDC	Nationally Determined Contribution
NEEAP	National EE Action Plan
NPV	Net Present Value
PFS	project financial statements
PHC	Public Health Center
PPDO	Project Procurement Development Objectives
PPP	public private partnership
PPSD	Project Procurement Strategy for Development
PSC	Project Steering Committee
QCBS	Quality-and-Cost-Based Selection
SME	small and medium enterprise
SOE	statement of expenses
SORT	Systematic Operations Risk-Rating Tool
SPN	Specific Procurement Notices
STEP	Systematic Tracking of Exchanges in Procurement
ToR	Terms of Reference
TSU	Technical Services Unit
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCC	United Nations Framework Convention on Climate Change
US$	United States dollar
WB	World Bank
WeBSEFF	Western Balkans Sustainable Energy Financing Facility

BASIC INFORMATION

Country(ies)	Project Name	
Montenegro	Montenegro Second Energy Efficiency Project	
Project ID	**Financing Instrument**	**Environmental Assessment Category**
P165509	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
04-Jun-2018	31-Dec-2023

Bank/IFC Collaboration

No

Proposed Development Objective(s)

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

Components

Component Name	Cost (US$, millions)
Component 1 – EE investments in public sector buildings	7,959,015.00

Component 2 – Technical assistance	406,890.00
Component 3 – Project implementation support	616,500.00

Organizations

Borrower:	Montenegro
Implementing Agency:	Ministry of Health Ministry of Economy

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	9.00
Total Financing	9.00
of which IBRD/IDA	7.39
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	7.39

Non-World Bank Group Financing

Counterpart Funding	1.61
National Government	1.61

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2018	2019	2020	2021	2022	2023
Annual	0.00	0.41	0.67	1.32	2.21	2.78
Cumulative	0.00	0.41	1.08	2.41	4.61	7.39

INSTITUTIONAL DATA

Practice Area (Lead)	Contributing Practice Areas
Energy & Extractives	

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?	
a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Moderate
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	
10. Overall	Moderate

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04		✓
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12		✓
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

Project Steering Committee

For purposes of ensuring Project oversight and coordination, the Borrower, through MoE shall maintain, throughout the implementation of the Project, a steering committee with responsibilities and composition, including, inter alia, representatives from the MoE, MoH and MoF as set forth in the Operational Manual.

Sections and Description

EE sustainable financing mechanism

For purposes of carrying out Part 1.1 of the Project, the Borrower shall, not later than December 31, 2021, define

an EE investment and implementation framework that would allow to sustain and scale-up EE improvements with contents acceptable to the Bank.

Sections and Description
Annual Work Plan

For purposes of carrying out the Project and starting on November 30, 2019, the Borrower shall, not later than November 30 of each year during Project implementation, prepare and submit to the Bank an Annual Work Plan (AWP) for the following year, including, inter alia, the proposed investment plan, its related expenditures and the sources of financing needed to implement the Project activities under the AWP, all as set forth in the Operational Manual and acceptable to the Bank.

Sections and Description
Health Care Facility Agreements

For purposes of carrying out Part 1 of the Project and prior to the carrying out of each EE Investment, the Borrower, through MoH and MoE shall enter into an agreement with each Health Care Facility under terms and conditions acceptable to the Bank, including, inter alia, the relevant Health Care Facility's obligations to: (a) maintain its respective EE Investment; and (b) share information on energy consumption.

Conditions

Type	Description
Effectiveness	Operational Manual - Condition of Effectiveness The Additional Condition of Effectiveness consists of the following: namely, that the Operational Manual has been adopted in a manner and with contents acceptable to the Bank.

MONTENEGRO SECOND ENERGY EFFICIENCY PROJECT

TABLE OF CONTENTS

I. STRATEGIC CONTEXT

A. Country Context

1. **Montenegro is a small[1] middle income country with a gross domestic product (GDP) per capita of US$7,029 in 2016**.[2] The country primarily relies on tourism and foreign direct investments (FDIs), and has the highest per capita income[3] among the Western Balkan countries. Montenegro has an open economy. It experienced a double-dip recession due to the 2008 global financial crisis and the 2012 Eurozone debt crisis, but its economy expanded by 3.5 percent in 2013, slowed down to 1.8 percent in 2014, and recovered to 3.4 percent in 2015. Though Montenegro remains highly susceptible to external shocks owing to its high external current account deficit and external debt ratio (13 percent and 152 percent of GDP in 2015, respectively), the economy grew by 2.9 and 4.2 percent in 2016 and 2017 respectively, and is expected to grow at an average of 2.5 percent per year by 2020.[4]

2. **Montenegro'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 Program for Accession to the European Union (EU) 2014-18. 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 Program for Accession to the EU 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 with the objective 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 reducing poverty and improving shared prosperity.

B. Sectoral and Institutional Context

3. **The Montenegrin economy is significantly less energy efficient and more carbon intensive than EU28 countries.** Despite a 30 percent decrease since 2005, the overall energy intensity of the Montenegrin economy (0.104 toe/thousand 2011 US$) remains about 20 percent higher than the EU28 average (0.09 toe/thousand 2011 US$). Mirroring the high energy intensity and relatively high reliance on fossil fuels[5] to meet energy demand, Montenegro emits more than 2.5 times more CO_2 per US$ of GDP compared to the EU average. [6] Buildings are the largest energy consumer in the country (accounting for more than 40 percent of final energy consumption[7]) and a major contributing factor to the high energy intensity. Non-residential buildings, including commercial and public-sector buildings, account for about

[1] Montenegro has a population of 624,000.
[2] World Bank National Accounts Data.
[3] Gross National Income (GNI) per capita of US$7,120, measured using the Atlas methodology.
[4] World Bank National Accounts Data.
[5] More than half of Montenegro's power supply is provided by lignite-fired power plants, most of which were commissioned 26-30 years ago; electricity is also used to cover 28 percent of Montenegro's heat demand, second after biomass (69 percent) and before coal and light fuel oil (1-2 percent).
[6] 2014 data. World Bank, World Development Indicators, accessed on January 16, 2018.
[7] 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). On this basis, the second largest energy consuming sector is transport (29 percent of final energy consumption), followed by industries (19 percent of final energy consumption).

40 percent of the final energy consumed in buildings.[8] At 175 kWh/square meter,[9] specific energy consumption in non-residential buildings in Montenegro is approaching some EU countries in colder climates, such as Denmark, where non-residential consumption is about 200 kWh/square meter. As penetration of appliances and comfort levels rise to EU levels, energy consumption in the buildings sector is bound to further increase. Key reasons for the high energy use in the buildings sector include the large share of dated buildings with poor insulation, old heating and lighting systems, years of under-maintenance, and insufficient incentives to save energy.

4. **The buildings sector has high energy efficiency (EE) potential.** A regional study on the EE potential in buildings in the Western Balkans[10] confirmed the high EE potential in the Montenegrin buildings sector, and estimated that EE improvements in the sector can reduce energy consumption by at least 30-45 percent, generate annual energy savings of 706 GWh, and reduce energy expenditures by €63 million.[11] The World Bank-financed Montenegro Energy Efficiency Project (MEEP, P107992) and its Additional Financing (P145399) substantiated the high EE potential and important co-benefits that can be realized in the public buildings sector. Specifically, in the 25 retrofitted public facilities under MEEP (2009-2018), energy consumption was cost-effectively reduced by an average of 45 percent. This is expected to generate 150 GWh of energy savings and 60,750 tons of CO_2 savings over the lifetime of the investments. As a result, EE improvements in the 25 retrofitted public facilities alone are estimated to reduce public energy expenditures by up to €600,000 per year, or about €8-10 million over the 15-20 year lifetime of the investments.[12] The EE investments in health sector buildings supported under MEEP have an average payback period around 10 years, demonstrating that energy cost savings can be used to recover investment costs. In addition, as one of the first EE investment projects, MEEP was critical to help develop the local EE market, and build implementation capacity within the Government as well as private energy service providers (e.g. energy auditors, design, construction and supervision companies).

5. **EE improvements in health sector buildings generate strong social benefits**. In addition to the high EE potential, MEEP has also demonstrated important social benefits associated with EE improvements in health sector buildings. This includes in particular improved comfort levels in the retrofitted public buildings (i.e. higher temperatures, better lighting, more accommodating aesthetics, and more appropriate humidity), which is particularly important for the welfare of the most vulnerable population groups, such as the elderly or children. The latter are more sensitive to and can be disproportionately affected by issues such as under-heated facilities or poor air quality. For instance, according to the MEEP social monitoring and evaluation reports, prior to the EE investments, close to one third (29%) of patients reported feeling cold in patient or waiting rooms. This figure dropped significantly following the EE retrofits (down to 3%). Overall end-user satisfaction levels in retrofitted facilities improved by 40 percentage points after the EE investments (as measured by end-user satisfaction surveys). In addition to this strong increase in patient welfare, management of health facilities highlighted that the better working conditions in their buildings resulted in reduced absenteeism and higher motivation levels among their staff. Site visits have repeatedly confirmed that EE retrofits undertaken in the health sector have responded to an important need and are highly appreciated by entire communities. Further social benefits include the positive employment impact in the construction sector, as well as

[8] Eurostat, 2016, Complex Energy Balance of Montenegro.
[9] World Bank, June 2014, Western Balkans: Scaling Up Energy Efficiency in Buildings.
[10] Energy Community Secretariat, 2012, EE in Buildings in the Contracting Parties of the Energy Community.
[11] This estimate includes all types of buildings in Montenegro.
[12] The cumulative cost savings total has been discounted using the average inflation rate of 2 percent.

reduced local pollution.

6. **The Government recognizes the benefits of EE investments in the buildings sector and has initiated a range of policy, regulatory and financing measures to improve EE.** EE is a cornerstone of Montenegro's energy policy as outlined in the Energy Development Policy by 2030, and the Energy Development Strategy by 2030. In line with its Energy Community Treaty obligations, the Government adopted a target to reduce final energy consumption by 9 percent by 2018 (with 2010 as baseline). The plans to meet this goal are outlined in the National EE Action Plans (NEEAPs) 2012-2018. As per the latest available NEEAP progress report, final energy consumption had been reduced by 4 percent in 2015. The current NEEAP (2016-2018) anticipates that 83 percent of the total energy savings will come from the buildings sector. To meet this goal, the Government initiated a range of important measures, including: (i) strengthening the EE legal and regulatory framework by transposing relevant EU directives and adopting related secondary legislation. This included the adoption of the Law on EE (2014) and related rulebooks on minimal EE requirements in buildings, certification of energy performance of buildings, and performance of energy audits in buildings and heating and air-conditioning systems; (ii) providing capacity building to private energy service providers and competent local inspection authorities on EE, *inter alia* involving training and certification of local companies to perform energy audits; and (iii) implementing EE projects in the public and residential buildings sector. Implementation of the NEEAPs is led by the Ministry of Economy (MoE) and financed through a combination of state budget (especially for policy, legal and regulatory measures) and support provided by development partners (see paragraph 8, and Section IV.D on role of partners).

7. **EE is also a cornerstone of Montenegro's Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC).** Even though the national Greenhouse Gas (GHG) emissions represent only 0.009 percent of global emissions, Montenegro, as a signatory to the Paris Agreement demonstrated its commitment to contribute to the global effort to address climate change. As part of this process - and in line with its national circumstances - Montenegro submitted its NDC to the UNFCCC committing to reduce up to 30 percent of GHG emissions by 2030 compared to the 1990 base year. Most of the reductions are anticipated to be achieved through a general increase in EE, improvement in industrial technologies, as well as an increase in the share of renewables and modernization of the power sector.

8. **There is need to scale-up EE in the public buildings sector in Montenegro and to transition to sustainable EE financing mechanisms**. The World Bank-financed MEEP (€11.5 million) and the KfW-financed EE project (€36.2 million) have helped to kick-start the Montenegrin EE market, build local capacity, and demonstrate the benefits and viability of EE investments in the public buildings sector. To date, the two projects supported EE investments in 53 public facilities, covering around 230,000 square meters of public buildings space. There are, however, over 1 million square meters remaining in public buildings that are estimated to require an additional €110 million for EE investments. The sizeable investment needs in the public buildings sector and the country's 9 percent energy savings target call for a substantial scale-up of EE investments. The budget-financed approach used for EE investments so far will not be able to meet these needs, as it can only address a limited number of buildings per year and is not sustainable in the long-term. Scaling-up EE investments in the public buildings sector will require a strategic shift towards sustainable financing mechanism that allow to leverage and pool resources, sustain efforts on a long-term basis and support the transition towards commercial financing options as the EE market matures. Although the third NEEAP envisages the establishment of sustainable EE financing mechanisms, limited progress has been made in this respect. Specifically, the Government is currently

working on the establishment of the ECO Fund, which – as per the Law on the Environment – is inter alia mandated to finance the preparation, implementation and development of environmental protection, EE and renewable energy investment programs. However, the ECO Fund is not yet operational, and its specific role in the area of EE remains to be decided by the Government.

9. **There are other technical, economic, institutional, regulatory and financial barriers impeding the scaling-up of EE investments in the public buildings sector**. In addition to the lack of sustainable EE financing models, there are other key barriers to scaling-up EE in the public buildings sector, including:

- *Financial barriers*: Access to affordable financing for EE investments in public buildings is limited by a number of factors that include: (i) lack of access to commercial financing by public entities due to existing restrictions on public borrowing and lack of creditworthiness; (ii) general reluctance of commercial banks to lend for EE in public buildings due to the lack of familiarity with financial and technical issues associated with EE investments, and perceived high risk and high transaction costs of EE; (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.
- *Policy, regulatory, technical and informational barriers*: EE improvement at scale in the public buildings sector is also hampered by a range of policy, regulatory, technical, informational and procedural barriers that include: (i) restrictions on the ability of public entities to retain energy cost savings or to conclude multi-year ESCO contracts; (ii) lack of standardized approaches and protocols to facilitate the preparation and implementation of EE projects in the public sector; (iii) public procurement rules requiring tenders to be evaluated purely on the basis of lowest upfront costs, as opposed to considering the net present value of investments; (iv) 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; (v) gaps in the regulatory framework related to building energy performance certificates; and (vi) 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.

10. **The proposed Montenegro Second EE Project (MEEP2) will help to address some of the prevailing EE barriers.** The proposed project represents an important shift as it is designed to support the transition to sustainable EE financing models and address some of the key barriers that are impeding scaling-up EE investments in the public buildings sector. Specifically, the project will help to:

- *Develop and demonstrate an EE financing model that allows to sustain EE investments and supports a gradual transition towards commercial financing options*: MEEP2 introduces a sustainable EE financing model, which uses achieved energy cost savings to recover part of the EE investment costs and to finance additional EE investments. This catalyzes a strategic shift from the current budget-financed approach to a sustainable financing model that allows to leverage MEEP2 resources by capturing and reinvesting achieved energy cost savings, enables the continuation of EE investments beyond project closing and demonstrates the principle of repayment of EE investments from energy cost savings. Demonstrating the viability of a sustainable EE financing model based on achieved energy cost savings under MEEP2 is a critical step to: (i) replicate the model to other public buildings sectors (e.g. education or municipally-owned buildings); (ii) introduce a systematic shift from budget/grant financing for EE projects towards the use of sustainable financing schemes in other donor-supported investment

programs, including in particular KfW; and (iii) move towards more commercial financing options for EE investments in the future, which build on the concept of using achieved energy cost savings to repay EE investments financed through energy service agreements, ESCOs, commercial banks and/or vendor credits.

To support this transition towards a sustainable and scalable EE investment framework, the proposed project combines the use of an energy savings capture model to finance EE investments supported under MEEP2 with targeted technical assistance provided during project preparation (with the support of the Energy Sector Management Assistance Program/ ESMAP) and implementation (through activities planned under Component 2).

- *Improve the enabling framework for EE* by: (i) further strengthening market capacity of local energy service providers through on-the-job training, issuance of energy performance certification for buildings, and potential piloting of simple performance-based contracts; (ii) providing technical assistance to help address selected legal and regulatory changes needed to facilitate scaling-up and replication of sustainable EE financing models (e.g. pertaining to the retention of energy cost savings, conclusion of multi-year ESCO contracts, and public procurement procedures, etc.); (iii) enhancing awareness on EE through communication activities as well as targeted end-user training on operation and maintenance of buildings; (iv) develop capacity to implement sustainable EE financing mechanisms; and (v) strengthening the monitoring system for energy consumption in public health sector buildings.

11. **MEEP2 will continue to focus on EE improvements in health sector facilities**. Building on the strong results achieved and implementation structures established under MEEP, the proposed project will continue to focus on supporting EE improvements in the health sector. This also ensures complementarity with the KfW-financed project (focusing on education and social buildings), and targeting of a sector with significant EE potential and strong welfare impact. Health sector buildings are estimated to account for around 20 percent of the public buildings square area and have usually higher specific energy needs (averaging around 250 kWh per square meter)[13] compared to other public buildings due to the type of services provided and equipment used. As described in paragraphs 4 and 5, EE improvements in health sector buildings can cost-effectively reduce energy consumption by around 40-45 percent while generating important social benefits for vulnerable population segments. In addition, focusing a scale-up of EE in the public buildings sector is important in terms of: (i) leveraging on the social outreach capacity of public sector buildings and sharing of social co-benefits more broadly among the population; (ii) further strengthening the nascent EE market and building on past achievements; and (iii) enabling the Government to lead by example. Supporting strengthening of market capacity, raising public EE awareness and developing sustainable EE financing mechanisms in the public buildings sector would also facilitate scaling-up of EE improvements in the residential sector.

C. Higher Level Objectives to which the Project Contributes

12. **The proposed project supports Montenegro's development objectives**. EE improvements not only save energy but also create fiscal space for other development priorities, improve public service delivery, and reduce GHG emissions while supporting the country in meeting its Energy Community Treaty obligations.

[13] Based on the results of the walk-through energy audits in 19 health sector buildings.

13. **Alignment with the Montenegro Country Partnership Framework (CPF) FY16-20.** The CPF's Objective 2(d) is to achieve "enhanced environmental sustainability." The proposed project will help to reduce GHG emissions and promote efficient use of energy in public buildings, which directly contributes 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 MEEP2 indicate that the average energy savings are estimated to range from 30 - 60 percent.

14. **The proposed project is aligned with the World Bank's goal to end extreme poverty and promote shared prosperity in a sustainable manner**. EE improvements in the public buildings sector help to: (i) reduce recurrent energy expenditures and create fiscal space for other development priorities; (ii) result in substantial social benefits, including improved public service environments and comfort levels which enhance working conditions and improve health care facilities for vulnerable population segments; and (iii) help create jobs and enhance competitiveness in Montenegro. International experience also indicates that EE investments in the public sector can help catalyze EE markets, allowing Governments to lead by example, and thus pave the way for EE investments in the broader economy.

15. **Contribution to Sustainable Energy for All (SE4All) and the Bank's Climate Change Action Plan.** The proposed project will improve EE in public buildings, thus contributing to the SE4All initiative, which calls for a doubling of the global rate of improvement in EE, as well as the Bank's Climate Change Action Plan in Europe and Central Asia (ECA) for 2017-2020.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

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

B. Project Beneficiaries

17. The project beneficiaries are expected to include:

(a) *Patients and staff working in the selected health sector buildings* – EE investments in the selected health sector facilities will improve comfort levels for both patients and staff. Beneficiary surveys of facilities renovated under MEEP indicate an average of 40 percentage points increase in end-user satisfaction after building renovations. Given the scope of the project and geographical distribution of the selected facilities, it is estimated that 220,000 potential patients and 2,000 staff will benefit from the investments. Information from selected facilities indicated that 50 and 75 percent of the patients and staff, respectively, are female.

(b) *Private EE service providers (e.g. energy auditors, design firms, construction companies, equipment suppliers)* – Private companies supplying energy efficient goods and/or energy services will benefit from increased demand, as well as enhanced experience and capacity for the preparation and implementation of EE investments.

(c) *Health care facilities, Ministry of Finance (MoF) and Ministry of Health (MoH)* – EE investments are expected to reduce energy consumption by an average of 45 percent. The related energy cost

savings will benefit retrofitted health care facilities, which are able to retain energy cost savings for one year, and subsequently MoF. The latter will also benefit from the transition from budget financing towards more sustainable mechanisms that reduce the need for EE budget support. Health care facilities and MoH will further benefit from renovated facilities with higher comfort levels, and an improved health service provision environment.

(d) *MoE* – The implementing ministry is expected to benefit from enhanced capacity to develop and implement sustainable EE financing, supporting its lead role in fostering EE improvements in Montenegro.

18. The monitoring and evaluation framework will include technical and social assessments pre- and post-renovation to validate project benefits and monitor the number of project beneficiaries.

C. PDO-Level Results Indicators

19. The PDO-level results indicators of the project are:

(a) Projected lifetime energy or fuel savings calculated in Mega Joules (MJ), disaggregated by: (i) Projected lifetime fuel savings (MJ); and (ii) Projected lifetime electricity generation savings (MJ);

(b) Development and demonstration of a sustainable financing model.

A "sustainable financing model" means a mechanism that enables at least part of the investment costs to be recovered through achieved energy cost savings, which will be reinvested to finance additional EE improvements in public buildings.

"Development" of the sustainable financing model will be assessed by: (i) defining and adopting the detailed operational modalities for the energy savings capture model (which is considered to be a sustainable financing model by enabling achieved savings to be captured and reinvested); and (ii) piloting the technical elements of the energy savings capture model using a reference building retrofitted under MEEP. "Demonstration" of the sustainable financing model will be assessed by: (i) implementing the energy savings capture model as a form of sustainable EE financing for all buildings renovated under MEEP2; (ii) adopting arrangements that would allow to continue capturing and reinvesting energy cost savings achieved for all buildings renovated under MEEP2; and (iii) developing an EE investment and implementation framework that would allow to sustain and scale-up EE improvements beyond MEEP2 (e.g. extension of energy savings capture model or EE revolving fund), including preparation of concept, detailed design and proposal for submission to Government.

20. A more detailed description of the second PDO-level results indicator[14] on the development and demonstration of the sustainable financing model, including sequence of the annual target values, is provided as part of the detailed Project description in Section III and Annex 1.

[14] In the results framework, Year 1 refers to 2018.

III. PROJECT DESCRIPTION

A. Project Components

21. The project will be supported by a €6 million IBRD loan and consists of three components: Component 1 - EE investments in health sector buildings; Component 2 - technical assistance; and Component 3 - project implementation support.

22. **Component 1 – EE investments in health sector buildings (estimated cost of €6.455 million, including €5.255 million IBRD, and estimated €1.200 million captured energy cost savings and co-financing provided by health sector facilities[15]).** This component will support: (i) EE investments in selected state-owned public health sector facilities, for which achieved energy cost savings will be captured and reinvested using an energy savings capture model; (ii) related technical services, including energy audits, designs, technical revision, works supervision, technical and social monitoring before and after the EE building renovations, and issuance of energy performance certificates for all retrofitted facilities; and (iii) installation of energy consumption monitoring equipment in health sector buildings.

23. These investments will reduce energy consumption and associated CO_2 emissions, help lower recurrent energy expenditures, and improve comfort levels in the retrofitted health sector facilities. The use of the energy savings capture model for EE investments will introduce an EE financing model that allows funds to revolve and demonstrate a scalable financing approach for EE investments in the public buildings sector.

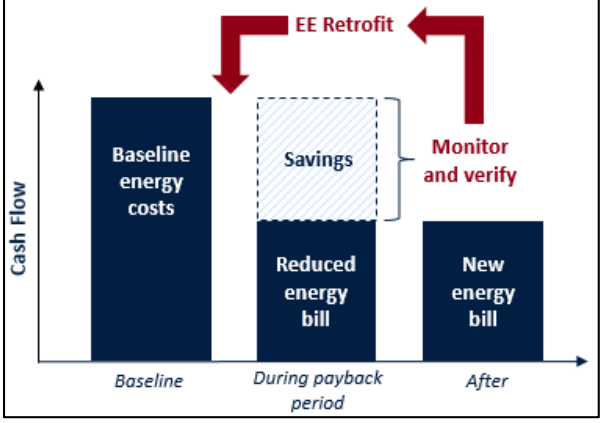
24. **Buildings eligibility criteria and selection process**. To be eligible, buildings must meet the following basic eligibility criteria: (i) public ownership; (ii) structural soundness of the buildings; (iii) absence of plans for closure, downsizing or privatization; and (iv) commitment to proper management, and operation and maintenance of new systems installed under the project. The selection of the buildings is based on a list of 20 priority health care facilities identified by the Government, considering geographical service coverage, EE potential, and regional distribution. The implementation of EE investments will be done in annual batches of 4-5 facilities, prioritized based on the estimated investment payback period. The technical documentation for the first set of five buildings selected for financing under Component 1 is currently being finalized using co-financing provided by the health sector facilities, and MEEP.

25. **Eligible investment measures.** For each building, detailed energy audits will be conducted to identify the economically most viable EE measures to be supported under MEEP2. Eligible measures include: retrofits of building envelopes (including façades, windows, roofs and doors); heating and cooling system upgrades (including fuel switching); lighting; and domestic hot water systems. A limited amount of MEEP2 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 downspouts, and installation of metering and monitoring equipment).

[15] This amount is an estimate that will be validated through the monitoring and verification process on actual savings achieved after the EE retrofits. The estimate is based on results available from preliminary energy audits conducted with a 20% discount factor. Co-financing provided by health sector facilities are likely targeting non-EE measures in selected buildings (e.g. upgrade sanitary facilities, floors, etc.), thus not directly impacting the cost estimates and results achieved under the project.

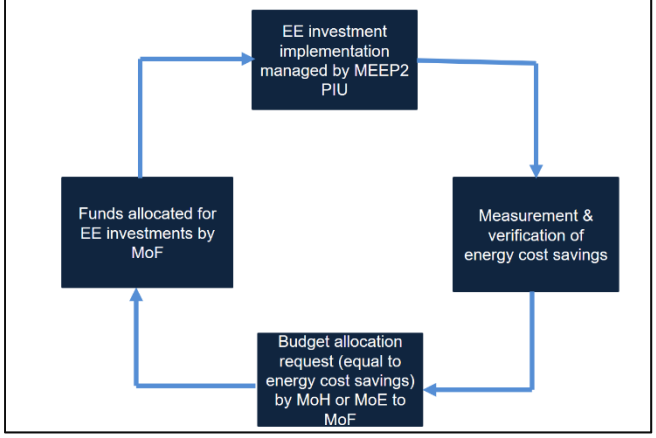
26. **Energy savings capture model**. An energy savings capture model will be developed and demonstrated in all buildings to be retrofitted under the project. The basic concept of the model is that planned EE investments are estimated to reduce energy consumption and related costs by 20-60 percent. As part of the energy savings capture model, these energy cost savings will be monitored, verified, captured and reinvested to support EE improvements in additional public-sector buildings (see Box 1).

Box1: Energy Savings Capture Model



27. The operational procedures and arrangements for the energy savings capture model will be described in the Project Operational Manual. A typical investment cycle under the energy savings capture model is illustrated in Box 2 and involves four basic steps:

Box 2: Investment cycle under the Energy Savings Capture Model



- *Preparation and implementation of EE investments and monitoring equipment:* The Project Implementation Unit (PIU) within MoE will prepare and implement EE investments in the selected facilities in accordance with World Bank guidelines and the agreed building selection process. The first batch of investments is expected to be fully funded through MEEP2 and completed in 2019.
- *Monitoring and verification (M&V) of achieved energy cost savings*: A simple M&V protocol, to be described in the Operational Manual, will be applied to monitor and verify the achieved energy and cost savings for each facility before and after completion of the EE retrofits. In addition, monitoring equipment will be installed in each facility to track changes in indoor temperature and energy consumption. After the initial M&V in each facility, the verified energy cost savings will be deemed to remain constant for the lifetime of the investment. The verified energy cost savings of all retrofitted facilities will then be consolidated in an annual M&V report, and submitted to MoE and the Project Steering Committee (PSC) as part of the PIU's annual reporting. As the EE retrofit of the first batch of buildings is expected to be completed during the construction season in 2019, the M&V protocol will likely be applied for the first time during the 2019/2020 heating season.
- *Budget allocation request:* As part of the annual budget cycle, MoH or MOE will request a budget allocation equivalent to the achieved energy cost savings recorded in the annual M&V report. The first request is expected to be submitted in 2020 for a 2021 budget allocation.
- *Allocation of the achieved energy cost savings:* MOF will allocate the achieved energy cost savings to provide co-financing to future EE investments under MEEP2, which would be approved as part of the annual budget by the Parliament. The achieved energy cost savings are likely to be allocated to a

budget line (capital expenditure or other) under MoH or MOE for the purpose of EE investments. The detailed set-up of the budget allocation model will be described in the Operational Manual.

- *Preparation and implementation of EE investments using captured energy cost savings and IBRD loan proceeds:* Once the achieved energy cost savings are captured/ allocated, the PIU will implement EE investments in selected health sector facilities to be retrofitted in 2021-2023 in the form of joint co-financing between captured energy cost savings and IBRD loan proceeds. The co-financing ratio will be determined annually based on the funds available through captured energy cost savings and defined in the Annual Work Plan.

28. Cumulative energy cost savings captured and reinvested until MEEP2 closing date of December 31, 2023, are estimated to amount to €1.2 million.[16] This would allow to recover and reinvest around one third of the EE investments cost during MEEP2 implementation. Subject to the demonstrated success of the model, the Government is committed to continue capturing and reinvesting achieved energy cost savings after project closing for 5-15 years, and replicate the energy savings capture model to other EE investment programs targeting the public buildings sector. In total, the energy savings capture model is estimated to capture €2.8-6.6 million, and achieve a direct leverage of MEEP2 resources between 34-110 percent, respectively. The detailed arrangements for the continuation of the energy savings capture model beyond MEEP2 will be developed and agreed during implementation of the project, as reflected in the results framework and a dated covenant included in the legal agreement. To inform this decision-making process, targeted technical assistance will be provided under Component 2 (see below) as well as through implementation support by the World Bank.

29. **Component 2 – Technical assistance (estimated cost of IBRD €0.33 million).** This component will finance activities to enhance local EE capacity related to: (i) the development of a long-term sustainable EE investment framework; (ii) the preparation, implementation and maintenance of EE investments; and (iii) implementation of gender-informed communication and awareness raising campaigns. The scope of targeted capacity building activities is summarized below:

- *Development of a long-term sustainable EE investment framework:* Technical assistance will be provided to support the development of an EE investment and implementation framework that would allow to sustain and scale-up EE improvements beyond the project. The scope of the technical assistance supported under MEEP2 would focus on: (i) developing institutional and implementation arrangements enabling the continued capturing and reinvestments of achieved energy cost savings after phasing-out of the MEEP2 PIU; (ii) developing the detailed design of an EE investment and implementation framework targeting the institutionalization of a sustainable EE financing mechanism for public buildings either as part of an expansion of the energy savings capture model to other sectors and programs and/or the establishment of an EE revolving fund;[17] and (iii) preparing legal and regulatory changes, as needed, to facilitate scaling-up and replication of sustainable EE financing models.

[16] The estimate considers that capturing of verified energy cost savings only occurs around 12-18 months after implementation of EE investments due to the timing of construction season (summer), M&V (heating season) and budget cycle (March-December). The estimate provided here and in the results framework is based on the approved annual budget equivalent to the achieved energy cost savings (in December) and expected to be transferred and reinvested for EE improvements.

[17] The ongoing ESMAP-supported long-term financing options study reviewed key barriers to scaling-up EE investments in the public buildings sector, and identified an extension of the energy savings capture model and or the establishment of an EE revolving fund as the most suitable options in the Montenegrin context. Both options are sustainable financing mechanisms, using energy cost savings to recover EE investment costs.

- *Capacity building activities*: EE capacity building activities would be provided on an as-needed basis to key project stakeholders, including local energy service providers (e.g. energy audit, design, construction and building certification companies), energy managers of retrofitted facilities, Government representatives, and other key stakeholders. Targeted support is expected to include training and technical assistance related to the issuance of building certificates, M&V of achieved energy and cost savings, improved operational and maintenance practices in retrofitted facilities, and/or other EE capacity building aspects.
- *Communication and awareness activities:* The project will support communication and public outreach activities to help enhance EE awareness by showcasing EE benefits (e.g. through promotion and dissemination of results achieved under MEEP2) and supporting information activities on how to improve EE, including through behavior changes. The activities would be conducted in a gender-sensitive manner.

30. **Component 3 – Project implementation support (estimated cost of €0.50 million, including €0.40 million IBRD and €0.10 million in-kind Government contribution).** The component will support the effective implementation and management of the project and its reflows from captured energy cost savings, including: (i) PIU staff expected to consist of a PIU manager and a technical EE expert; (ii) lump-sum payments to the Government's Technical Service Unit (TSU) responsible for procurement and financial management functions; (iii) project-related operating costs; and (iv) financial audits.

B. Project Cost and Financing

31. The proposed project will be implemented over five years, and will be financed by an IBRD loan of €6.00 million to Montenegro.

Project Components	Project cost (€)	IBRD Financing (€)	Counterpart Funding (€)
Component 1: EE investments			
EE Investments (civil works and contingency)	6,020,000	4,280,000	1,200,000*
Technical services (energy audits, designs, etc.)		540,000	
Monitoring equipment	435,000	435,000	
Subtotal	*6,455,000*	*5,255,000*	*1,200,000**
Component 2: Technical Assistance			
TA to operationalize EE financing mechanisms	200,000	200,000	
Capacity building to key stakeholders	50,000	50,000	
Communication and awareness campaign	80,000	80,000	
Subtotal	*330,000*	*330,000*	

Component 3: Project implementation support			
TSU and other operating costs	221,000	121,000	100,000**
PIU Manager	143,000	143,000	
Technical EE expert	120,000	120,000	
Financial audit	16,000	16,000	
Subtotal	*500,000*	*400,000*	*100,000***
Front-end fee	15,000	15,000	
Total Costs			
Total Project Costs	7,300,000	6,000,000	1,300,000
Total Financing Required	7,300,000	6,000,000	

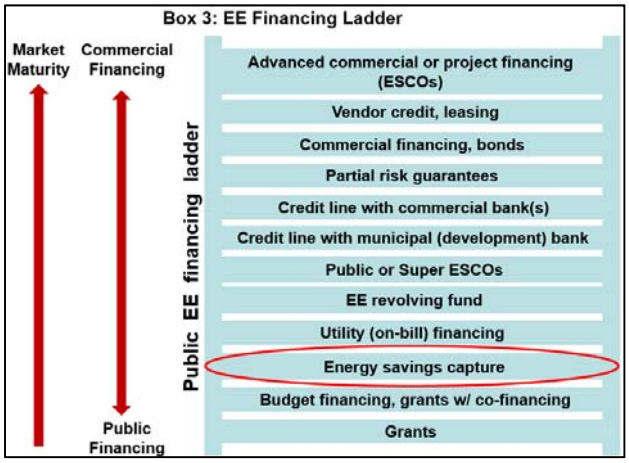
** from captured energy cost savings; ** in kind Government contribution*

C. Lessons Learned and Reflected in the Project Design

32. The design of the project draws upon experience and lessons learned from previous World Bank public building EE projects in Montenegro and the broader ECA region. These include: MEEP and its Additional Financing (2009 and 2014, respectively), the Bosnia Energy Efficiency Project (2014), Kosovo Energy Efficiency and Renewable Energy Project (2014), Armenia Energy Efficiency Project (2012), FYR Macedonia Sustainable Energy Project (2006), Bulgaria Energy Efficiency Project (2005), Kazakhstan Energy Efficiency Project (2013), and Serbia Energy Efficiency Project (2004). The design also draws from recent World Bank and Energy Sector Management Assistance Program (ESMAP) publications. Key lessons include:

- *Limited replication of EE investment projects without sustainable EE financing mechanisms.* Many governments in developing countries, with the support from development partners, have financed pilot or demonstration EE projects in public buildings using grant or budget financing. These projects helped to demonstrate the sizeable energy savings potential in the public buildings sector, reasonable payback periods and substantial co-benefits. However, lessons learned also show that: (i) there is only limited replication of pilot and grant-financed projects without sustainable financing mechanisms; (ii) PIUs established to implement demonstration programs ore often 'orphaned' upon project completion, leading to a loss of their technical and implementation capacity; and (iii) individual projects can only address a limited number of buildings per year and may not be scalable. There is a general recognition that such grant and budget-financed projects are not sustainable in the long term, and that EE projects generate cost savings that can be used to repay investment costs. Therefore, various countries, including in the Western Balkan region, are now moving towards more sustainable financing and implementation (see below).

- *Gradual transition to sustainable EE financing mechanisms for public buildings.* In the buildings sector, international experience shows that a wide range of financing options and instruments are available to address some of the common market barriers in the public buildings sector. These options range from predominantly public financing to commercial financing (see Box 3); their suitability will depend on the maturity of local markets and the creditworthiness of the underlying borrowers. International and regional experience also emphasizes that it is advisable to start with simple models to demonstrate the benefits of EE, followed by the introduction of using energy cost savings to recover EE investment costs, and gradually transition towards more complex commercial financing options as the market develops. Montenegro is currently largely financing EE through grants and budget financing, which is at the bottom of the EE financing ladder. Based on the analysis of prevailing EE barriers and market maturity in Montenegro, conducted with the support of ESMAP, the most suitable EE financing options that would allow to gradually decrease reliance on budget support for EE involve the use of an energy savings capture model, which enables capital recovery through a budget capture mechanism, or the establishment of a EE revolving fund.



- *Ongoing policy dialogue and capacity building are important for project implementation and sustainability*. Combining policy dialogue with technical assistance and capacity building support are critical to overcome barriers during project preparation and implementation. This is especially the case with regards to innovative EE financing models, where policy dialogue and capacity building are critical to enhance the enabling environment for EE.

- *Enhanced monitoring and evaluation is important to capture the benefits of EE investments and related energy cost savings.* Strong monitoring and evaluation of technical and social aspects of EE investments is important to capture project benefits in a well-documented manner, and strengthen awareness and understanding of factors that impact achieved results (e.g. including behavior changes and comfort levels that impact energy and cost savings). While sound M&V procedures are important to determine baselines and outcomes, there is a need to balance related costs and complexity with the required level of accuracy.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

33. **Overall implementation arrangements**. The Directorate for EE under the MoE will serve as the lead Government project implementing entity. It will chair an inter-ministerial PSC, which will provide oversight and strategic guidance during project implementation. The PIU under the Directorate for EE will be responsible for day-to-day operations of the project, while the Technical Service Unit (TSU) will assume

responsibility for all fiduciary functions. The MEEP2 implementation arrangements fully build on the experience and arrangements established under MEEP, with minor changes to accommodate the introduction of the energy savings capture model. The specific roles of the key project stakeholders are summarized below.

34. **PSC.** The PSC will provide oversight and strategic guidance throughout project implementation. The PSC, chaired by the MoE, will also facilitate inter-ministerial coordination, and consist of representatives from the MoH and the MoF. Representatives from other ministries may be added to the PSC or meetings on select topics of broader relevance (e.g. Ministry of Education, Ministry of Sustainable Development and Tourism).

35. **Directorate for EE**. The Directorate for EE will: (i) provide day-to-day guidance to the PIU; (ii) coordinate with MoH for the selection of health care facilities, and related implementation decisions; and (iii) lead the development the energy savings capture model as well as the long-term sustainable EE investment framework. The Directorate has sufficient capacity to support the project given its experience as the implementing entity for MEEP and the KfW-financed EE project.

36. **MEEP2 PIU**. The PIU will be responsible for day-to-day operations of the project, including: (i) preparation, implementation and supervision of EE investments in hospitals and health centers; (ii) management of capacity building activities supported by the project; (iii) monitoring, evaluating, and reporting on project results and outcomes, including the captured energy cost savings; and (iv) implementing the energy savings capture model, including development of detailed operational procedures, preparation of annual M&V reports as well as implementation of the investments co-financed through captured energy cost savings. The PIU will be composed of a PIU manager and a technical EE expert. The MEEP2 PIU has sufficient capacity and experience to prepare and implement the project given the experience of the MEEP2 PIU manager in the same function under MEEP.

37. **MoH.** As the responsible line Ministry for facilities to be retrofitted under MEEP2, MoH will be closely involved in the preparation and implementation of Component 1 of the project. The cooperation between the Directorate for EE and the MoH is well established due to the previous experience under MEEP, and will be reflected in the Project Operational Manual. MoH, together with MoE, will also conclude an agreement with each health care facility to be retrofitted under the project. The agreement will outline the main terms and conditions related to the EE investment.

38. **TSU.** Fiduciary responsibilities, including procurement and financial management and disbursement, will be carried out by the existing central TSU for IBRD funds and the captured energy cost savings. Expenses incurred by the TSU will be financed out of the loan on a pro rata basis with other World Bank-financed projects in Montenegro. The TSU will be responsible for the preparation of quarterly unaudited financial reports and annual audited financial statements; and the procurement related to all works, goods, and consulting and non-consulting services. The TSU has sufficient capacity given its fiduciary role for all World Bank-supported projects.

B. Results Monitoring and Evaluation

39. **Main monitoring and evaluation (M&E) arrangements**. The PIU will be responsible for day-to-day M&E of implementation progress under each component. To this end, the PIU will establish a simple information management system for M&E to systematically track progress on different aspects of project implementation, including the results indicators listed in Section VII. The PIU will prepare a semi-annual

progress report to the PSC and the World Bank for review. In addition to regular implementation support missions (see Annex 3), a mid-term review will be carried out by the World Bank team to assess the overall project progress, identify critical implementation issues and make necessary adjustments to the project design, its components or implementation schedule.

40. **Main information sources**. The main information sources for M&E include: energy audit reports; technical M&V reports of energy and cost savings achieved; and social M&E reports. The latter will involve beneficiary surveys in the retrofitted facilities to assess improvements in terms of end-user satisfaction and to capture other social co-benefits generated through the EE investments. The surveys among patients will be carried out in a gender-sensitive way, i.e. with an equal number of men and women respondents. Given the higher representation of women among health care staff, the responses of employees will be collected and analyzed separately and may include some qualitative data, collected for example through interviews or focus groups. Results will be disaggregated by gender and examine possible changes in women's awareness and willingness to improve EE in their homes before and after the retrofits. The terms of reference for the social monitoring work will include the requirement to integrate a gender-based analysis section in the social monitoring reports. One of the intermediate results indicators is the increase in women's awareness of EE in a selected sample of the health care facilities where EE investments have been carried out.

C. Sustainability

41. **Approach to achieve scalability and sustainability of the project**. Because IBRD funding is limited and the need for EE investments in buildings is sizeable at around €110 million, sustainability is important to the project's design. To this end, MEEP2 introduces a sustainable financing model, aimed at: (i) leveraging MEEP2 funds by more than 34 percent (or €2.8 million) through capturing and reinvesting energy cost savings; and (ii) demonstrating the principle of repayment of EE investments from energy cost savings, which is critical to transition towards more commercial financing options, reduce the need for budget support for EE investments, and inform the design of the KfW-supported EE project targeting buildings in the education and social sector. In addition, the project also integrates technical assistance to support the transition to a long-term EE investment framework that allows to sustain and scale-up EE improvements beyond the project. The proposed sequencing of phases and objectives to build a framework for sustainable and scalable EE investments in the public buildings sector is outlined in the table below.

Phase	Objectives
MEEP (completed): budget financing	• Build implementation capacity within the Government and market actors on EE preparation • Demonstrate energy savings and social benefits of EE, enhance public awareness on EE
MEEP2 (proposed): energy savings capture model	• Develop and demonstrate principle of repayment of EE investments from energy cost savings • Further strengthen EE implementation capacity through targeted training and technical assistance, including in the areas of building energy performance certificates, simple ESCO models and sustainable EE financing

	• Strengthen energy management in public buildings through training on operations and maintenance of buildings after retrofits, installation of energy monitoring equipment and M&V of achieved energy cost savings • Coordinate approach with KfW to increase scale and impact, including through replication of the energy savings capture model • Support design and implementation arrangements of a sustainable EE investment framework that can be operated beyond the project, with focus on an extended energy savings capture model and/or an EE revolving fund • Prepare legislative and regulatory changes to support transition to commercial financing models (budget retention of energy savings, multi-year and performance-based contracting, M&V, etc.)
Follow-up phase: scale-up sustainable financing schemes	• Operationalize extended energy savings capture model or EE revolving fund operated by sustainable institutions anchored in the country framework • Introduce ESCO contracting models • Train private market actors on EE financing and implementation, including local banks, ESCOs, municipalities, etc.

D. Role of Partners

42. **KfW**. KfW has provided €36.2 million for EE investments in schools which is complementary to MEEP and MEEP2 investments in health care facilities. The investments are being implemented under the Energy Efficiency Programme in Public Buildings. KfW is also financing the implementation of a central energy consumption monitoring system for public buildings, which will be *inter alia* populated by data from monitoring equipment (e.g. electricity, heat and water meters, temperature sensors, and data processors) planned to be installed under Component 1 for the largest energy consumers in the health sector, including buildings retrofitted under MEEP and MEEP2. KfW and the Government are at the early stage of discussing the preparation of a €50 million follow-up EE operating in the education and social buildings sector. Based on discussions during MEEP2 preparation, KfW expressed interest in replicating the energy savings capture model to the planned follow-up operation, subject to the Government's approval and support. Both MoE and the Ministry of Education also confirmed their willingness to replicate the energy savings model on the basis of the results achieved and procedures established under MEEP2.

43. **United Nations Development Program (UNDP).** UNDP is providing support to the Ministry of Sustainable Development and Tourism to set up the ECO Fund, including management structures and procedures, sources of funds, initial staffing requirements and defining the scope of environmental protection activities to be assumed by the Fund. The ECO Fund is one of the institutional options for hosting and operating the long-term sustainable EE financing framework, proposed to be supported during MEEP2 implementation through Component 2. A decision by the Government on the establishment and operational modalities of the ECO Fund, including its mandate in the area of EE, is expected by mid-2018. UNDP has committed its follow-up support to help develop the business plan and

operational procedures for the Funds' activities in the area of environmental protection. Subject to the decision by the Government on EE activities to be operated through the Fund, MEEP2 would complement technical assistance support required for setting-up the implementation and operational arrangements for EE investments.

44. **European Bank of Reconstruction and Development (EBRD).** EBRD is supporting MoE to develop an ESCO legal framework, and a public private partnership (PPP) law. Results achieved and lessons learned will be considered when designing the sustainable EE financing framework to be developed under Component 2 of the project. Through the Western Balkans Sustainable Energy Financing Facility (WeBSEFF), EBRD is also providing a credit line to finance EE investments in small and medium enterprise (SMEs) through local participating banks.

45. **EU.** The Instrument for Pre-accession Assistance II (IPA II) for the period 2014-2020 allocates an indicative amount of €270.5 million to Montenegro. Environment and Climate Action figure among the strategic priority areas under IPA II with a notional allocation of €37.5 million by 2020. As part of this priority area, the EU is *inter alia* planning to support the operationalization of the ECO Fund and sustainable EE financing approaches. The EU will be a key partner during preparation and implementation of the project, especially with regards to the development and operationalization of the sustainable EE investment framework. The close collaboration with the EU will also build on the strong partnership between the Bank and the EU in supporting Governments in the Western Balkans to establish scalable and sustainable EE financing mechanisms (e.g. Kosovo and FYR Macedonia).

46. **Others.** The Luxembourg Agency for Development Cooperation and Norwegian Government provided €130,000 and €390,000 grants, respectively, for the Energy Wood Program. The program provides interest-free loans (up to €3,500 with a repayment period of up to 5 years) for the purchase and installation of modern biomass heating systems. The United Nations Environment Program (UNEP) and the Italian Ministry for the Environment, Land and Sea provided a US$1 million credit line to install solar water heaters in selected Montenegrin households under the MonteSol Program. The program provides interest free loans up to €5,000 which are repayable over 7 years. Both programs focus on the residential sector, and are complementary to MEEP2's focus on the public buildings sector.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

47. The overall risk rating for the proposed project is moderate. Risks related to 'institutional capacity for implementation and sustainability' are rated substantial for the reasons outlined below. All other risks are rated moderate.

48. **Institutional capacity for implementation and sustainability.** Institutional capacity and sustainability risks derive from the following: (i) lack of experience in Montenegro to implement EE projects using sustainable financing models; (ii) risks related to the continuation of the energy savings capture model after closing of the project; (iii) ongoing debate on the set-up and operationalization of the ECO Fund, including in particular its mandate related to EE investments; and (iv) willingness of other development partners to support replication of a sustainable financing model as part of future EE investment. Given that efforts on the development of scalable and sustainable EE financing mechanisms

have only started, and considering the political and operational challenges to set-up and operationalize a new financing mechanism, related risks are substantial. These risks will be mitigated by: (i) providing technical assistance during preparation and implementation of MEEP2, including with the support of ESMAP, the World Bank team and activities included under Component 2; (ii) adopting a phased approach for developing and agreeing on short- and long-term arrangements related to the energy savings capture model, and describing the detailed implementation arrangements in the Project Operational Manual; (iii) closely coordinating with other development partners to adopt a consistent approach for EE financing in the public buildings sector; and (iv) closely monitoring progress on the establishment of the ECO Fund, and coordinating activities with relevant key stakeholders.

49. **Climate Change and Disaster Screening.** Based on the screening for short and long-term climate change and disaster risks conducted, the geophysical risk of earthquakes and landslides is rated as medium in Montenegro. This means that there is a 10 percent chance of potentially-damaging earthquake shaking in the next 50 years and that vulnerable buildings are at risk of damage or collapse. The structural soundness of selected buildings is an eligibility criterion, and retrofitted buildings must comply with the current seismic code. Should the evaluation reveal structural deficits that cause serious risk of collapse due to earthquakes, the cost of the additional earthquake-related works will be evaluated and the following would apply: (i) for facilities where co-financing can be mobilized to implement these non-EE measures or where required works are below the 10 percent limit for non-EE, retrofits will integrate both EE and seismic improvements; or (ii) the facility will be removed from the list of facilities to be renovated under the project. The risk of river, urban or coastal flooding is very low in most of the country. However, there is a high river flood hazard in the Podgorica region, and a high urban flood hazard in Plav, Berane, and Andrijevica. Climate predictions are inconsistent, but floods may worsen as the climate warms. Therefore, the specific locations, with respect to flood zones, of buildings targeted for retrofit under the project will be taken into consideration, and appropriate measures will be assessed at design stage.[18]

VI. APPRAISAL SUMMARY

A. Economic and Financial (if applicable) Analysis

50. Economic and financial appraisal was conducted through a cost and benefit analysis of the investments in the health sector facilities. The investments are considered economically and/or financially viable if the Net Present Value (NPV) of economic and/or financial benefits is positive, and the Economic Internal Rate of Return (EIRR) and/or Financial Internal Rate of Return (FIRR) is higher than its respective discount rate. The appraisal was conducted for a general hospital and a health center as representative facilities from the set of 20 priority facilities.

51. **Economic analysis.** The key quantifiable economic benefits of EE investments in the health sector facilities are the economic value of energy savings, improved comfort levels, and CO_2 emission reductions. The energy savings are calculated from the estimated difference in energy consumption before and after EE investments using data collected from preliminary walk-through energy audits. The audits considered normative comfort level requirements, and the economic value of the energy savings is calculated using the economic price of electricity or light fuel oil depending on the type of energy saved. The light fuel oil is primarily used in boilers for heating, and electricity is primarily used for lighting, heating and running

[18] Assessment of disaster and climate risk from GFDRR www.thinkhazard.org.

various hospital or health center equipment. Additional economic benefits such as improved building condition and better quality of service offered to patients are not quantified in this analysis. The economic costs considered for the analysis are the capital investment costs. Operation and maintenance costs for investments which include facades, windows and doors, roofs, and insulation were neither quantified nor included in the analysis.

52. The analysis was exclusive of the 21 percent value added tax, assumed a 15-year economic life of the investments, and a low[19] and a high[20] shadow price of carbon as per Word Bank guidelines. The results of the economic analysis show that the investments are economically viable as summarized in Table 1 for the low shadow price carbon, and Table 2 for the high shadow price of carbon. The economic NPVs for Niksic General Hospital and Plav Public Health Center (representative facilities from a broader set of facilities) are positive in both cases, and the EIRRs are substantially higher than the economic discount rate of 4.6 percent.[21] Without considering the carbon price i.e. assuming a carbon price of US$0/ton of CO2, the EIRRs for Niksic and Plav are 15.1 percent and 22.8 respectively, meaning that the project is economically viable in that scenario as well.

53. Sensitivity analysis was conducted using investment cost and amount of energy savings as key input parameters that affect the economic viability of the investments. The results show that the investments remain robust and economically viable unless the investment cost increases by 40 percent and the energy savings simultaneously decrease by 20 percent.

Table 1: Summary of Economic Analysis Results (with low shadow price of carbon)

	Economic NPV (US$)	**EIRR (%)**	**Payback (years)**
Niksic General Hospital	507,887	17.2	5
Plav Public Health Center	379,339	25.8	3

Table 2: Summary of Economic Financial Analysis Results (with high shadow price of carbon)

	Economic NPV (US$)	**EIRR (%)**	**Payback (years)**
Niksic General Hospital	603,763	19.3	4
Plav Public Health Center	439,708	28.6	3

54. **GHG accounting**. GHG accounting was also conducted to analyze the climate impact of the

[19] The World Bank Guidance Note on Shadow Price of Carbon in Economic Analysis (2017) suggests the use of a **low** economic price of carbon which starts at US$39/ton CO2 in 2019 and increases to US$53/ton CO2 at the end of the 15-year economic life of the investments.
[20] The World Bank Guidance Note on Shadow Price of Carbon in Economic Analysis (2017) suggests the use of a **high** economic price of carbon which starts at US$78/ton CO2 in 2019 and increases to US$107/ton CO2 at the end of the 15-year economic life of the investments.
[21] World Bank Guidelines advise teams to use an economic discount rate equal to two times the expected real GDP per capita growth rate over the next five years - which is about 2.3 percent for Montenegro.

project. MEEP2 is expected to save 560,000 tons of CO_2-equivalent over the 15-year lifetime of the investments.[22]

55. **Financial analysis.** The key quantifiable financial benefits of the EE investments are the reduction in energy costs, and the improvement in comfort levels. The reduction in energy consumption was estimated from preliminary energy audits of selected facilities, and it is valued at the financial cost (tariff) of electricity and light fuel oil as of December 2017. The analysis includes the 21 percent VAT, and assumes a 15-year financial life for the investments.

56. The results show that the investments are financially viable (Table 3). The financial NPVs are positive, and the FIRRs are higher than the financial discount rate of 12 percent. The payback periods are reasonable at 5 and 4 years, respectively. Sensitivity analysis shows that the investments are financially viable except in a scenario in which the investment cost increases by 20 percent, and energy savings simultaneously decrease by 20 percent.

Table 3: Summary of Financial Analysis Results

	Financial NPV (US$)	FIRR (%)	Payback (years)
Niksic General Hospital	19,287	12.1	9
Plav Public Health Center	32,279	14.7	6

B. Technical

57. The project will finance standard EE measures in health care facilities, using proven energy-saving technologies and equipment with demonstrable energy and cost savings. No technology risk should be incurred. Depending on results of the detailed energy audits conducted in each facility, EE measures implemented may include: (i) thermal insulation of roofs, basements, doors, and windows; (ii) window and door replacements; (iii) construction of new boiler rooms; (iv) centralized heating controls; (v) new heating installations; (vi) reconstruction of heating zones; (vii) solar water heaters; (viii) central domestic hot water heaters; (ix) replacement of old lighting with LEDs; (x) centralized cooling; and (xi) monitoring equipment. Where technically and financially feasible, the project will also support fuel switching in heat-only-boilers from light fuel oil to biomass. Proper implementation of the measures will be ensured by using a qualified works supervision company, conducting frequent supervision visits by the PIU, and performing commission tests upon completion of civil works. The walk-through energy audits have been conducted for 19 priority buildings and indicate that energy savings average around 45 percent, which is consistent with the technical M&E results of investments supported under MEEP.

C. Financial Management

58. Financial management arrangements for the project are acceptable to the Bank. The Ministry of Finance's TSU will be responsible for fiduciary aspects of project implementation. The TSU is a well-established unit with qualified staff experienced in World Bank financial management and procurement procedures. The TSU currently manages fiduciary functions, including procurement, of seven World Bank-

[22] The analysis assumes 18 percent transmission and distribution losses, and a grid emission factor of 0.792 tCO2/MWh.

financed projects.

59. The Designated Account for the project will be opened in a commercial bank acceptable to the Bank. The Designated Account will be in Euro. Funds will be disbursed either as an advance, via a Designated Account, or by direct payment, on the basis of direct payment withdrawal applications. Funds will be withdrawn to the Designated Account, up to the ceiling amount that will be described in the Disbursement and Financial Information Letter (DFIL), through withdrawal applications signed by the authorized signatories. The project financial statements will be audited by independent auditors acceptable to the World Bank, and based on ToRs acceptable to the Bank. Interim Unaudited Financial Reports (IFRs) will be submitted to the Bank in the agreed format, 45 days after the end of each calendar quarter throughout the life of the Project. Detailed procedures with regards to energy cost saving model will be described in the Operational Manual to be completed by effectiveness and tested as part of MEEP2. The manual is expected to define detailed implementation arrangements, including procedures for monitoring and verifying the level of cost savings, modality related to the Government's allocation of the said amount, use of the funds for re-investment, as well as monitoring and supervision arrangements of the use of funds.

D. Procurement

60. Procurement will be conducted according to the World Bank's Procurement Regulations for Investment Project Financing (IPF) Borrowers', issued in July 2016, for the supply of goods, works, and non-consulting and consulting services, and the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006 and revised in January 2011 as of July 1, 2016. Under the new policy, the Project Procurement Strategy for Development (PPSD) is prepared to analyze and determine the optimum procurement approach to deliver the right procurement result and will be finalized before negotiations.

E. Social (including Safeguards)

61. **Social Safeguards.** Social impacts are expected to be positive. EE investments in selected health care facilities will benefit patients and staff through enhanced comfort levels, and a better working and recovery environment. As the project envisages retrofitting already existing public buildings within their existing footprint, no acquisition of land, displacement of people, or any other adverse social impacts (such as loss of assets, loss of income due to retrofitting works, loss of jobs) are expected. 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 Operational Manual will explicitly indicate that any subproject which would require land acquisition or involuntary resettlement will be excluded from funding. Further social issues linked to the retrofitting activities (such as facility user safety; workers' safety; and traffic and pedestrian safety), have been included in the Environmental and Social Management Framework (ESMF), and will also feature in the building-specific Environmental Management Plans (EMPs). The social outcomes of the project will also be monitored by the social monitoring surveys which will be conducted before and after the retrofitting works.

62. **Citizen engagement**. Social monitoring surveys will be used as citizen engagement mechanism to capture end-user feedback. The surveys will collect data from patients and professionals working in the facilities selected on a sample basis. Questions to be included will likely encompass subjective evaluations

of comfort levels, quality of windows, joinery, heating systems, air, lighting, etc. The surveys will also be instrumental in capturing changes in awareness/knowledge levels about EE and individual attitudes towards the adoption of EE measures in citizens' own homes. The project is characterized by citizen-oriented design, as surveys conducted prior to the refurbishments will allow the project to address recommendations from beneficiaries that may be relevant to include in the retrofitting works (e.g. wheelchair accessibility), in line with the CPF's Citizen Engagement Roadmap FY16-20 for Montenegro. It is planned that the survey will include a question related to users' evaluation of the project's citizen-oriented design, such as for instance "Do you feel that the retrofits were centered on citizens' needs?". Furthermore, survey results will be disaggregated by vulnerability markers (such as age, income group or employment status for example) to analyze possible variations in answer patterns and draw up recommendations specific to certain vulnerable groups. The results framework includes the beneficiary feedback indicator "percentage of project beneficiaries reporting an improvement in building comfort level, disaggregated by gender", which is closely linked to the PDO. In addition, the communication and awareness-raising campaign on EE will promote project's achieved results (e.g. public discussion and dissemination of survey results, creation of online and offline communication materials), including to feed back to beneficiaries how relevant recommendations have been addressed and integrated in the retrofitting works. The communications and awareness raising campaign will be timed and carried out in order to maximize outreach and sensitization of end-users to the topic of EE and to highlight project results. It will be an important tool to spread knowledge about the benefits of EE and contribute to behavior changes in the population regarding energy usage.

63. **Gender**. Although the project will benefit women and men equally through the retrofits, existing data suggests that there is a gap between males and females regarding awareness and knowledge levels of EE in the country. Early results from the social monitoring survey for the MEEP, i.e. data from 400 patients (200 men and 200 women) *before* the retrofitting works, reveal that while on average 61 percent of men had heard about EE, only 46 percent of women had. This suggests that men are generally better informed of topics related to EE and the construction sector. Consequently, the project will use the communication and awareness-raising campaign to provide gender-sensitive information to beneficiaries and conduct specific outreach activities to reduce this gap. The project will also support training on operation and maintenance of retrofitted buildings, including recommendations on behavior changes that help to save energy. Efforts will be made to ensure proper representation of female staff in the training. These actions will contribute to closing the gap between males and females in terms of "voice and agency", one of the four pillars of the World Bank Group Gender Strategy 2016-2023: as women become more aware of EE concepts, they become better equipped to make decisions about their own lives and act on them to achieve desired outcomes. This is even more important as women tend to be underrepresented in the energy field and might forego some employment opportunities in this expanding sector of the economy due to a low awareness of EE concepts and applications. Ensuring that women are familiar with EE and its implications (both at the individual level and in the job market) therefore constitutes a first step towards allowing them to make well-informed decisions regarding their households and professional trajectories. Lastly, the social monitoring surveys will have an equal representation of female and male respondents, and reports will analyze data disaggregated by gender and social dimensions to reflect evolutions in women's awareness and knowledge about EE. The results framework includes the following intermediate result indicator: "increase in women's awareness of EE".

64. **Grievance Redress Mechanism (GRM)**. Based on the experience of the MEEP, it appears that the risk of project-related grievances is low. During the previous phase of the project and its additional

financing, no grievance was reported. However, possible complaints from project-affected people may arise in relation to the EE retrofit works (e.g. high noise, increased dust emissions). As part of MEEP2, the primary grievance focal point will be the site manager appointed by contractors, who will be responsible for relations with the local population and handling possible complaints. Contact information to this person will be made available to the public at all locations where the works are being performed. Contracts shall specify that all complaints received by contractors should be communicated to the PIU manager.

65. Project-affected people will also be able to file a grievance personally, verbally by telephone, or in writing through e-mail, post, fax or personal delivery to a designated MEEP2 team project specialist (team engineer), whose name, postal address, e-mail address, phone and fax number will be included in particular EMPs.

66. Should complainants be dissatisfied with the outcome of the first-level grievance redress process, they will have the possibility to appeal to the MEEP2 PIU Manager, whose postal address is: Rimski trg 46, Podgorica, and whose email address, and phone and fax numbers will be included in particular ESMPs.

67. Grievances will be systematically acknowledged: an interim reply will be sent within three working days of receipt and will provide the complainant with basic information about next steps. This will be followed by an investigation stage, and the communication of a suggested grievance resolution to the complainant in writing within one month of the grievance receipt. The grievance will be considered "closed" after the implementation of the resolution has been verified.

68. The PIU manager will add all complaints received to a grievance log recording the following elements: date the grievance was received; channel through which the grievance was received; gender of the complainant; location concerned by the grievance (city and health facility); brief description of grievance; classification/type of grievance; date an acknowledgement was sent to the complainant; description of actions taken (investigation, corrective measures); current status of grievance (e.g. pending due to investigation, closed); date of resolution suggestion sent to complainant. Project-affected people may also submit complaints to the municipal police or to the environmental inspection body. All complaints submitted to the municipalities and/or inspection bodies also need to be communicated to the PIU manager, who will add them to the grievance log. The PIU shall inform the Bank immediately of any grievance received.

F. Environment (including Safeguards)

69. The project is rated environmental category B as per Operational Policy OP/BP 4.01. The main activities of the Project relate to EE measures that will be undertaken through civil works in 15 to 20 selected public buildings throughout Montenegro. It is not planned that the existing footprint of related buildings will be expanded. The project will not fund activities related to construction of new buildings. No category A-type subprojects nor category A-type activities will be implemented within the project. No works will be undertaken in nature protected areas.

70. Implementation of the project-funded activities is not expected to have any significant negative environmental impact. The complexity of civil works will range from internal 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. The environmental risks and issues related to the Project-funded activities include noise, dust, vibrations, material

managemnt, potential incidentall pollution of soil and water, and management of construction waste during civil engineering activities - which could be successfully managed and mitigated by application of good engineering practice. Other risks, although not likely to be encountered on more than a few sites, may include hazardous material/waste, such as asbestos insulation or crude oil waste in fuel tanks, which will be dealt by the licensed contractors. Specific issues that will also be taken care of relate to management of the sites (as health centers need to continue operating during the works execution), and general health and safety of population that uses these structures.

71. The MoE has almost 10 years of experience in implementing World Bank-funded projects. It implemented MEEP (P107992) which includes implementation of EE related civil works and other measures in publicly owned buildings - schools, hospitals and municipal health centers. The PIU has experience and capacity in dealing with environmentally-related issues, and is aware of the current World Bank environmental policies. The PIU will, during Project implementation, be staffed with a part-time environmental expert, whose duties will include among others: (i) completion of Environmental Checklists and preparation of site-specific EMPs; (ii) incorporation of Final EMPs, after the Bank's approval, into respective tender documents; (iii) monitoring and reporting on compliance with site-specific EMPs; and (iv) reporting on compliance with EMPs and ESMF to the Bank.

72. The ESMF, including a generic EMP and sample Environmental Checklist, was prepared by the Borrower, and disclosed in-country in February 2018. It stipulates that site-specific EMPs and Environmental Checklist will be prepared during project implementation for each specific health center – and will become part of the bidding documents and resulting civil works contracts. It was consulted with relevant stakeholders, including potential beneficiary institutions, municipalities, municipal infrastructure companies, regional culture and nature protection institutes, MoH, local and national NGOs as well as the general public. The final ESMF was submitted to the Bank and approved on March 6, 2018, and was disclosed in the Bank system on April 2, 2018.

G. Other Safeguard Policies (if applicable)

73. Operational Policy on Physical Cultural Resources (OP/BP 4.11) is triggered. It is expected that few buildings may be under culture heritage protection regime. For these structures an opinion will be obtained from the relevant national institutions, relevant measures incorporated into ESMF, and included in site-specific EMP. In case of earthworks and civil works related to outside fuel storage tanks, handling procedures will be included in EMP.

H. World Bank Grievance Redress

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit *http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service*. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

Project Development Objective(s)

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

PDO Indicators by Objectives / Outcomes	DLI	CRI	Unit of Measure	Baseline	End Target
Improved energy efficiency in health sector public buildings					
Projected energy or fuel savings		Yes	Mega Joules (MJ)	0.00	215,000,000.00
Projected lifetime fuel savings		Yes	Mega Joules (MJ)	0.00	192,000,000.00
Projected electricity generation savings		Yes	Mega Joules (MJ)	0.00	23,000,000.00
Developed and demonstrated sustainable energy efficiency financing model					
Develop and demonstrate a sustainable financing model			Text	No sustainable financing model	(a) Energy savings capture model implemented; (b) arrangements for MEEP2 energy savings adopted; (c) proposal for long-term EE investment framework submitted to Government

Intermediate Results Indicators by Components	DLI	CRI	Unit of Measure	Baseline	End Target
Component 1: Energy efficiency investments in public sector buildings					
Net greenhouse gas emissions		Yes	Tones/year	0.00	-3,211.27
Number of buildings retrofitted			Number	0.00	18.00
Percentage of project beneficiaries reporting an improvement in building comfort level, disaggregated by gender			Percentage	0.00	30.00
Percentage of male project beneficiaries reporting an improvement in building comfort level			Percentage	0.00	30.00
Percentage of female project beneficiaries reporting an improvement in building comfort level			Percentage	0.00	30.00
Component 2: Technical Assistance					
Increase in women's awareness of EE			Percentage	0.00	10.00
Captured energy cost savings			Amount(USD)	0.00	1,200,000.00

Monitoring & Evaluation Plan: PDO Indicators	
Indicator Name	Projected energy or fuel savings
Definition/Description	
Frequency	Annual
Data Source	Detailed energy audit reports, and calculations from M&V results.
Methodology for Data Collection	
Responsibility for Data Collection	PIU
Indicator Name	Projected lifetime fuel savings
Definition/Description	
Frequency	Annual
Data Source	Detailed energy audit reports, and calculations from M&V results.
Methodology for Data Collection	
Responsibility for Data Collection	PIU

Indicator Name	Projected electricity generation savings
Definition/Description	
Frequency	Annual
Data Source	Detailed energy audit reports, and calculations from M&V results.
Methodology for Data Collection	
Responsibility for Data Collection	PIU

Indicator Name	Develop and demonstrate a sustainable financing model
Definition/Description	
Frequency	Semi-annual
Data Source	Progress reports, and progress updates
Methodology for Data Collection	
Responsibility for Data Collection	Directorate of EE

Monitoring & Evaluation Plan: Intermediate Results Indicators	
Indicator Name	Net greenhouse gas emissions
Definition/Description	
Frequency	Annual
Data Source	Detailed energy audit reports and calculations from M&V results.
Methodology for Data Collection	
Responsibility for Data Collection	PIU
Indicator Name	Number of buildings retrofitted
Definition/Description	
Frequency	Annual
Data Source	Technical monitoring reports
Methodology for Data Collection	
Responsibility for Data Collection	PIU

Indicator Name	Percentage of project beneficiaries reporting an improvement in building comfort level, disaggregated by gender
Definition/Description	
Frequency	Annual
Data Source	Beneficiary survey reports
Methodology for Data Collection	
Responsibility for Data Collection	PIU

Indicator Name	Percentage of male project beneficiaries reporting an improvement in building comfort level
Definition/Description	
Frequency	Annual
Data Source	Beneficiary survey reports
Methodology for Data Collection	
Responsibility for Data Collection	PIU

Indicator Name	Percentage of female project beneficiaries reporting an improvement in building comfort level
Definition/Description	
Frequency	Annual
Data Source	Beneficiary survey reports
Methodology for Data Collection	
Responsibility for Data Collection	PIU

Indicator Name	Increase in women's awareness of EE
Definition/Description	
Frequency	Annual
Data Source	Beneficiary survey reports
Methodology for Data Collection	
Responsibility for Data Collection	PIU

Indicator Name	Captured energy cost savings
Definition/Description	
Frequency	Annual
Data Source	Annual M&V reports; and budget allocations from MoF
Methodology for Data Collection	
Responsibility for Data Collection	PIU

ANNEX 1: DETAILED PROJECT DESCRIPTION

COUNTRY : Montenegro
Montenegro Second Energy Efficiency Project

1. The project is proposed to be financed by a €6 million IBRD loan, and implemented by the Directorate for EE within the MoE in close collaboration with the MoH and MoF. The project consists of three components: (i) Component 1 – EE investments in health care facilities; (ii) Component 2 – Technical assistance; and (iii) Component 3 – Project implementation support.

Component 1 – EE investments in health sector buildings (estimated cost of €6.455 million, including €5.255 million IBRD and estimated €1.200 million captured energy cost savings and co-financing provided by health sector facilities[23])

2. **Focus on state-owned health sector buildings**. The project will focus on state-owned health sector buildings in line with the Government's EE priorities and strategy for scaling-up EE. As per the NEEAPs, the focus on the public sector is chosen to: (i) leverage on the social outreach capacity of public sector buildings and sharing of social co-benefits among the population; (ii) using EE investments in public sector buildings for strengthening the still nascent EE market and provide on-the-ground implementation experience; and (iii) championing the demonstration of EE benefits in the buildings sector. The specific focus on health sector facilities also is proposed to: (i) ensure complementarity with the KfW-financed EE project, which targets educational and social public buildings; (ii) build on implementation structures developed under MEEP; (iii) ensure targeting of a sector with significant EE potential and strong welfare impact, as demonstrated under MEEP (see Section II paragraphs 4 and 5); (iv) facilitate the introduction of the proposed energy savings capture model as under-heating is generally less prevalent in health care facilities compared to education or social buildings; and (v) enhance monitoring of energy consumption in health care facilities through installation of related monitoring equipment.

3. **Summary of the health sector buildings and related budgeting processes**. While there is no public buildings database in Montenegro, data from the Real Estate Administration of Montenegro and Ministry of Economy indicates that the total area of health care buildings is 190,839 square meters. This equals roughly 20 percent of the heated floor area in public buildings. The remainder of the public buildings stock is composed of educational buildings (459,000 square meters) and other public buildings (e.g. social and office buildings). In terms of energy consumption in public buildings, heating accounts for more than 60 percent[24] of the energy use and heat-only-boilers installed in public buildings are estimated to account for approximately one-fifth of the heat production in the country. The specific energy demand in health care facilities (estimated at around 250 kWh per square meter) is usually higher compared to other public buildings (estimated at around 175 kWh per square meter) due to the type of services provided and equipment used. In terms of budgeting process of energy expenditures in health sector buildings, the facilities conclude service contracts with the Health Insurance Fund, which is established as an independent entity with public authority pertaining to the mandatory health insurance system in the country. The Health Insurance Fund is also responsible for consolidating and submitting annual budget requests for health care facilities to the MoH. In terms of energy expenditures, the annual budget allocated to each health care facility for the forthcoming year is based on the previous calendar year's expenses.

[23] Co-financing provided by health sector facilities are likely targeting non-EE measures in selected buildings (e.g. upgrade sanitary facilities, floors, etc.), thus not directly impacting the cost estimates and results achieved under the project.
[24] Data is based on walk-through energy audits of sampled facilities whose heat consumption ranged from 63 to 74 percent.

Electricity and water bills are paid directly by the health care facility to the respective utilities; for heating fuel supply, the Health Insurance Fund conducts a centralized public procurement procedure based on annual plans submitted by the health care facilities. The latter remain responsible for payment of the fuel supplied by the selected contractor. In 2016, the health care buildings consumed 15.6 GWh of electricity and 880,259 liters of fuel for a total cost of €5.5 million.[25] As per current budgeting procedures, there is no provision for health care facilities to retain any portion of energy cost savings achieved through EE improvements (i.e. budget allocation for energy expenditures will be lowered in subsequent years as energy costs are reduced due to EE improvements) – the energy cost savings are captured at the state-level by the MoF.

4. **Scope of Component 1**. This component will support: (i) EE investments in selected state-owned public health sector facilities, for which achieved energy cost savings will be captured and reinvested ('energy savings capture model'); (ii) related technical services, including energy audits, designs, technical revisions, works supervision, technical and social monitoring before and after the EE building renovations and issuance of energy performance certificates for retrofitted facilities; and (iii) installation of energy consumption monitoring equipment in health sector buildings. These investments will reduce energy consumption and associated CO_2 emissions, help lower recurrent energy expenditures, and improve comfort levels in the retrofitted health sector facilities. The use of the energy savings capture model for EE investments will introduce a sustainable EE financing model that allows to leverage MEEP2 financing by capturing and reinvesting achieved energy cost savings, enables the continuation of EE investments beyond project closing and demonstrates the principle of repayment of EE investments from energy cost savings, thus catalyzing a strategic shift from budget financing towards sustainable approaches for the public buildings sector.

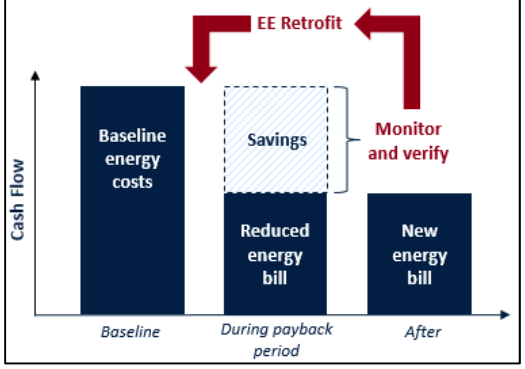
5. **Buildings eligibility criteria and selection process**. To be eligible, buildings must meet the following basic eligibility criteria: (i) public ownership; (ii) structural soundness of the buildings; (iii) absence of plans for closure, downsizing or privatization; and (iv) commitment to proper management, operation and maintenance of new systems installed under the project. The selection of the buildings is based on the list of 20 priority health care facilities identified by the Government, considering geographical service coverage, EE potential, and regional distribution. The implementation of EE investments will be done in annual batches of about 4-5 facilities, prioritized based on the estimated investment payback period.

6. **Eligible investment measures.** For each building, detailed energy audits will be conducted to identify the economically most viable EE measures to be supported under MEEP2. Eligible measures include: retrofits of building envelopes (including façades, windows, roofs, and doors); heating and cooling system upgrades (including fuel switching); lighting; and domestic hot water systems. A limited amount of MEEP2 funds (up to 10 percent 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 downspouts). Additional non-EE measures may be financed through health sector facilities and implemented as joint co-financing with MEEP2 resources.

[25] Data provided by the Ministry of Economy

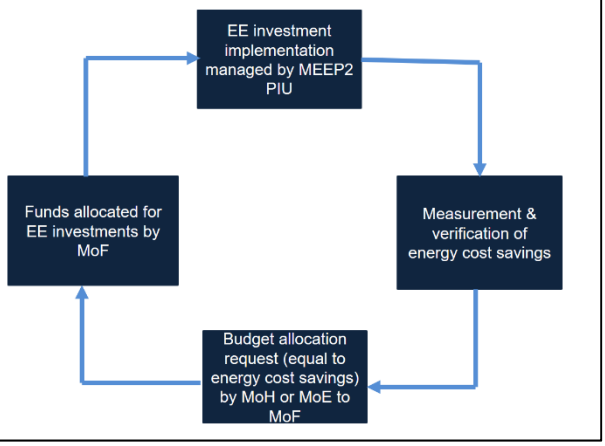
7. **Energy savings capture model**. An energy savings capture model will be developed and demonstrated for all buildings to be retrofitted under the project. The detailed implementation modalities will be described in the Project Operational Manual.[26] The basic concept of the model is that planned EE improvements are estimated to reduce energy consumption and related costs by 20-60 percent. As part of the energy savings capture model, these energy savings, generated through the EE investments, will be monitored, verified, and captured to support EE improvements in additional public-sector buildings (see Box 1). By capturing and reinvesting verified energy cost savings, the model demonstrates a sustainable financing mechanism that would not only allow to leverage limited MEEP2 funds, but also introduces a financing scheme that enables investments to be sustained beyond MEEP2 and could be replicated to other sectors and programs in the future. This transition to sustainable financing is critical to introduce models that allow to recover EE investment costs on the basis of achieved energy cost savings, which is a key step towards more commercial financing options.

Box1: Energy Savings Capture Model



8. The energy cost savings capture model for the duration of MEEP2 is designed to be in line with the current budgeting procedures and is proposed to be implemented as follows (see Box 2 for illustration):

Box 2: Investment cycle under the Energy Savings Capture Model



- *Preparation and implementation of EE investments:* The PIU will prepare and implement EE investments in the selected health sector facilities in accordance with the agreed building selection process and World Bank guidelines. The first two building batches will be fully funded through MEEP2 and are expected to be completed in 2019 and 2020 respectively.
- *M&V of achieved energy cost savings:* To determine the achieved energy cost savings, monitoring equipment will be installed in health care facilities and a M&V protocol will be developed and described in the Operational Manual. Under Component 1, a consultancy company would be hired to conduct M&V of the energy consumption and costs before and after EE investments in each retrofitted facility during the heating season preceding and following the investment. Based on the monitored and verified energy cost savings (with normalization of heating degree days and other adjustment factors to be determined in the protocol), the verified energy cost savings in subsequent years will be assumed to continue at the same level for the lifetime of the investment in the facility ('deemed savings approach'). The annual cumulative results of achieved energy savings in all retrofitted and monitored facilities will be summarized in an annual consolidated M&V report

[26] The adoption of a Project Operational Manual, satisfactory to the World Bank, is a condition of effectiveness. This allows the Government sufficient time to develop technical, operational and procedural steps to ensure implementation readiness of the energy savings capture model by effectiveness. As per the Government's request, the detailed arrangements for capturing and allocating the energy cost savings as part of the annual budget cycle (e.g. budget line item within MoE or MOH) will be further refined in an updated version of the Project Operational Manual, which is due at effectiveness.

to be prepared by the PIU and submitted to MoE and the PSC as part of routine project reporting. The M&V process for the first set of buildings will be conducted during the heating season in 2018/2019 (baseline measurements) and 2019/2020 (M&V of achieved energy savings after the EE retrofit), respectively.

- *Annual budget allocation request:* On the basis of the annual M&V report prepared by the PIU and as part of the regular budgeting process, MoH or MOE will submit to MoF an annual request for a budget allocation equivalent to the reported energy cost savings achieved. The first request is expected to be submitted in 2020 for the first batch of retrofitted buildings (for a budget allocation in 2021). At the same time, at the level of individual health care facilities and the Health Insurance Fund, the budget requests and allocation for energy expenditures would continue to be determined based on the current practices, i.e. energy costs of the previous year are used to determine budget allocations for the forthcoming fiscal years. As energy expenses of retrofitted health care facilities reduce one year after the EE retrofits, so will the budget outlays for energy (i.e. budget allocated from MoF to Health Fund and health care facilities will be lower after the EE retrofits as per reduced energy bills).
- *Allocation of the achieved energy cost savings:* MOF will allocate the achieved energy cost savings to provide co-financing to future EE investments under MEEP2, which would be approved as part of the annual budget by the Parliament. The achieved energy cost savings are likely to be allocated to a capital expenditure budget line under MoH for EE, starting from January 2021. The detailed set-up of the budget allocation model will be described as part of the Operational Manual.
- *Preparation and implementation of EE investments co-financed by captured energy cost savings and IBRD loan proceeds*: In 2021-2023, the PIU will implement EE investments in the building batches using joint co-financing from IBRD loan proceeds and the captured energy cost savings. Co-financing is expected to focus on EE civil works with all technical services and operating costs to be covered by IBRD loan proceeds and Government in-kind contribution. The co-financing ratio for EE civil works will be determined annually based on the funds available from IBRD loan proceeds and captured energy cost savings, and defined in the Annual Work Plan. The Work Plan will be submitted by the PIU every November to the World Bank for review, outlining the planned investments for the following year as well as the co-financing arrangements based on the available funds (IBRD and captured energy cost savings). Based on the Annual Work Plan, the Bank will issue a notification to the Government confirming the disbursement ratio and related sources of funds. For the duration of MEEP2, the PIU will remain responsible for the preparation and implementation of all EE investments in line with the agreed implementation arrangements under MEEP2. The TSU will remain responsible for all fiduciary functions.

9. Based on the results of the preliminary walk-through audits conducted for 19 selected buildings, for the duration of MEEP2, the estimated energy cost savings to be captured and allocated for reinvestments amount to about €1.2 million. This would allow to recover and reinvest around on third of the EE investment costs during MEEP2 implementation. Subject to the demonstrated success of the model, the Government is committed to continue capturing and reinvesting achieved energy cost savings after project closing for 5-15 years, and replicate the model to other EE investment programs targeting the public buildings sector. In total, the model is estimated to result in €2.8-6.6 million captured and reinvested energy cost savings, generating a sizeable leverage of MEEP2 resources of 34-110 percent. The detailed arrangements for the continuation of the sustainable financing model beyond MEEP2 will be developed and agreed during project implementation, as reflected in the results framework. To inform the decision-making process on the setting-up of the implementation arrangements beyond MEEP2, targeted technical assistance will be provided under Component 2 as well as through

implementation support provided by the World Bank.

10. **Implementation readiness.** Walk-through energy audits were conducted for all 20 priority health sector facilities to collect data on key buildings characteristics, and estimate investment costs, energy and energy cost savings, investment payback periods, and other key parameters. The first annual batch of buildings to be retrofitted includes four health care centers and one general hospital. The technical documentation for these buildings (detailed energy audit, design and technical specifications) is currently being finalized by the Government, so that the bidding process for civil works can be launched shortly after project appraisal. Table A.1 provides a summary of the first set of buildings expected to be retrofitted under MEEP2.

Table A.1: Summary of energy audits for first year buildings

Building	Location	# Potential Users[27]	Area (m^2)	Key Investments	Investment costs (€)	Energy Savings (kWh)	Energy Savings (%)	Payback period
PHC Plav	Northeast	15,000	1,835	Window replacements, domestic hot water; replacement of fluorescent tubes, etc.	198,418	338,419	47.6%	4.5
PHC Rozaje	Northeast	22,000	3,628	Roof thermal insulation, centralized heating control, basement ceiling insulation	222,568	272,812	29.7%	5.5
PHC Berane	North	10,000	3,500	Façade thermal insulation, boiler replacement, replacement of fluorescent tubes	371,743	543,885	51.8%	4.1
GH Bar	Coast	40,000	7,965	Roof thermal insulation, façade thermal insulation, sun protection, doors, solar water heaters, LED lighting, reactive	1,012,000	897,884	27.7%	8.8

[27] For popular tourist destination, the higher summer population is considered as the number of potential users

PHC Ulcinj	Coast	10,000	2,940	Façade thermal insulation, reconstruction of heating zones, replacement of fluorescent lighting	343,856	174,549	44.8%	7.7

11. In addition, the World Bank team – with the support of ESMAP and in close collaboration with the MoE and MoF – conducted a detailed assessment on the proposed energy savings capture model, related international experience and the implementation modalities, including a simple M&V protocol for achieved energy and cost savings. This will help to inform the preparation of the updated Operations Manual, which will outline the specific implementation arrangements for the energy savings capture model.

Component 2 – Technical assistance (estimated cost of IBRD €0.33 million)

12. This component will finance activities to enhance local EE capacity related to: (i) the development of a long-term sustainable EE investment framework; (ii) the preparation, implementation and maintenance of EE investments; and (iii) implementation of gender-informed communication and awareness raising campaigns. The scope of targeted technical assistance activities is summarized below:

- *Development of a long-term sustainable EE investment framework:* Technical assistance will be provided to support the development of an EE investment and implementation framework that would allow to sustain and scale-up EE improvements beyond the project. This will build on, and complement various efforts that include: (i) results of the ongoing financing options study funded by the ESMAP, which evaluates key barriers to scaling-up EE investments and analyzes the development of a cross-sectoral energy savings capture model and an EE revolving fund as long-term EE financing options in the Montenegrin context; the study also compares different institutional options for operating the framework, and provides guidance on moving forward as the Government takes a decision on the long-term financing and implementation mechanism; (ii) experience and lessons learned from past and ongoing EE investment programs in Montenegro and the broader ECA region, including MEEP; and (iii) progress on the establishment and design of the ECO Fund under the Ministry of Sustainable Development and Tourism.

  On this basis, the scope of the technical assistance supported under MEEP2 is proposed to focus on the following: (i) developing institutional and implementation arrangements enabling the continued capturing and reinvestments of achieved energy cost savings after phasing-out of the MEEP2 PIU; (ii) developing the detailed design of an EE investment and implementation framework targeting the institutionalization of a sustainable EE financing mechanism for public buildings either as part of an expansion of the energy savings capture model to other sectors and programs and/or an EE revolving fund; specifically, this may include the preparation of a detailed operational manual outlining the related governance and implementation arrangements, scope and conditions of financing and technical assistance services to be offered, and related financing projections; and (iii) preparing legal and regulatory changes to facilitate scaling-up and replication of EE sustainable financing models, e.g. involving revisions of budgeting procedures/ regulations to allow for energy cost savings retentions, signing of multi-year contracts, and/or supporting the introduction of simple ESCO procurement and energy performance contracting models to promote private sector participation.
- *Capacity building activities*: EE capacity building activities will be provided on an as-needed basis to key project stakeholders, including local energy service providers (e.g. energy audit, design, construction and

building certification companies), energy managers of retrofitted facilities, Government representatives, and other key stakeholders. Targeted support is expected to include training and technical assistance related to the issuance of building certificates, M&V of achieved energy and cost savings, improved operational and maintenance practices in retrofitted facilities, and/or other EE capacity building aspects.

- *Communication and awareness activities:* The project will support communication and public outreach activities to help enhance EE awareness by showcasing EE benefits (e.g. through promotion and dissemination of results achieved under MEEP2) and supporting information on how to improve EE, including through behavior changes. The activities would be conducted in a gender-sensitive manner. An analysis of the communication gaps will be conducted, and a communication strategy developed to fill the perceived gaps.

Component 3 – Project implementation support (estimated cost of €0.5 million, including €0.40 million IBRD and €0.1 million in-kind)

13. The component will support the effective implementation and management of the project, including: (i) PIU staff expected to consist of a PIU manager and a technical EE expert; (ii) lump-sum payments to the Government's TSU responsible for procurement and financial management functions; (iii) project-related operating costs; and (iv) financial audits.

ANNEX 2: IMPLEMENTATION ARRANGEMENTS

COUNTRY : Montenegro
Montenegro Second Energy Efficiency Project

1. **Overall implementation arrangements.** The Directorate for EE under the MoE will serve as the lead Government project implementing entity. It will chair an inter-ministerial Project Steering Committee (PSC), which will provide oversight and strategic guidance during project implementation. The PIU under the Directorate for EE will be responsible for day-to-day operations of the project, while the TSU will assume responsibility for all fiduciary functions. The MEEP2 implementation arrangements fully build on the experience and arrangements established under MEEP, with minor changes to accommodate the introduction of the energy savings capture model. The specific roles of the key project stakeholders are summarized below.

2. **PSC.** The PSC will provide oversight and strategic guidance throughout project implementation. The PSC, chaired by the MoE, will also facilitate inter-ministerial coordination, and consist of representatives from the MoH and the MoF. Representatives from other ministries may be added to the PSC or meetings on select topics of broader relevance (e.g. Ministry of Education, Ministry of Sustainable Development and Tourism).

3. **Directorate for EE**. The Directorate for EE will: (i) provide day-to-day guidance to the PIU; (ii) coordinate with MoH for the selection of health care facilities, and related implementation decisions; and (iii) lead the development of the energy savings capture model and the long-term sustainable EE investment framework. The Directorate has sufficient capacity to support the project given its experience as the implementing entity for MEEP and the KfW-financed EE project.

4. **MEEP2 PIU**. The PIU will be responsible for day-to-day operations of the project, including: (i) preparation, implementation and supervision of EE investments in hospitals and health centers; (ii) management of capacity building activities supported by the project; (iii) monitoring, evaluating, and reporting on project results and outcomes, including the captured energy cost savings; and (iv) implementing the energy savings capture model, including development of detailed operational procedures, preparation of annual M&V reports as well as implementation of the investments co-financed through captured energy cost savings. The PIU will be composed of a project manager and a technical EE expert. The MEEP2 PIU has sufficient capacity and experience to prepare and implement the project given experience of the MEEP2 project manager in the same function under MEEP.

5. **MoH.** As the responsible line Ministry for facilities to be retrofitted under MEEP2, MoH will be closely involved in the preparation and implementation of Component 1 of the project. The cooperation between the Directorate for EE and the MoH is well established due to the previous experience under MEEP, and will be reflected in the Project Operational Manual. MoH and MoE will also conclude an agreement with each health care facility to be retrofitted under the project. The agreement will outline the main terms and conditions related to the EE investment.

6. **TSU.** Fiduciary responsibilities, including procurement and financial management and disbursement, will be carried out by the existing central TSU for IBRD funds and the captured energy cost savings. Expenses incurred by the TSU will be financed out of the loan on a pro rata basis with other World Bank-financed projects in Montenegro. The TSU will be responsible for the preparation of quarterly unaudited financial reports, and annual audited financial statements; and the procurement related to all works, goods, and consulting and non-consulting services. The TSU has sufficient capacity given its fiduciary role for all World Bank-supported projects.

Financial Management

7. **Implementing Entity.** The Directorate of EE within the MoE will have overall responsibility for implementation of the project, while the TSU within the MoF will be in charge of fiduciary aspects of project implementation, namely financial management and procurement. The TSU has a long track record of ten years of successful implementation of World Bank projects. It is currently in charge of fiduciary aspects of six ongoing projects in Montenegro. The unit is staffed by qualified and experienced staff in all functions, including financial management (FM). It includes two procurement and two FM staff (Senior FM Officer and FM Officer). Performance of the TSU during implementation of the ongoing project (MEEP) was overall satisfactory.

8. **Risk Analysis.** The financial management risk is rated to be moderate. Combined fiduciary risk is assessed as moderate (see procurement section).

9. **Strengths.** The TSU is staffed by qualified and experienced staff which represents an important driver for successful implementation. In addition, the staff has substantial prior experience in implementation of World Bank supported projects, which was gained during the implementation of six currently active projects.

9. **Weaknesses.** Without undermining strengths derived from the TSU's experience and prior performance, there is a potential risk of overstretching the unit's capacity. The TSU is already in charge of the fiduciary aspect of six projects under implementation. Expanding their scope of work with new projects would require monitoring the TSU's capacity and potential need to increase the headcount with experienced and qualified professionals. The risk will be monitored and mitigated through the Bank's implementation support. The respective procedures related to eligibility, evaluation, selection, and flow of funds will be included in the Project Operations Manual, and the project will build on MEEP implementation arrangements.

10. **Planning and Budgeting.** Planning and budgeting for the previous/ongoing World Bank projects implemented by the TSU proved to be adequate. The Directorate of EE will play an important role in the process of planning and budgeting as well, thus good communication between the Directorate of EE and the TSU is a factor for success. The Directorate of EE will take the lead role in preparing project budgets, while the TSU will provide inputs, particularly on disbursement forecasts. It is important that there is sufficient capacity for planning and budgeting to be able to manage project funds in an optimal manner from aspects of funds allocation, liquidity and overall performance. Any variances between actual and budgeted figures should be monitored regularly, appropriately analyzed, and corrective actions should be taken.

Accounting

11. Staffing. While the FM function in the TSU is staffed by experienced and qualified specialists, the implementing entity is responsible for the project's FM arrangements, and its accountant will provide supplementary expertise and time as required. The accounting will be compliant with World Bank procedures for accounting, reporting, disbursement, and as necessary, procurement procedures.

12. Information Systems. The TSU has acquired and installed FMS.sys accounting software to be used for project accounting for ongoing projects. Analytical records are maintained in parallel in Excel as it is assessed by the TSU as most efficient. Management information system developed for implementation of ongoing projects has been assessed to be adequate for implementation of this project.

13. Accounting Policies and Procedures. The accounting books and records are maintained on cash basis with additional information on signed contracts. Project financial statements will be presented in EURO. Accounting policies and procedures currently used for ongoing project with will serve as a basis for the new project. Additional accounting policies to be applied for the project will include the following major assumptions:

- cash accounting as the basis for recording transactions;
- reporting should be done in EURO (reporting currency);
- consolidated IFRs should be prepared to cover all donor funds and all components;
- counterpart funds should be reflected in the financial reports.

14. **Internal Controls.** An adequate system of internal controls has been instituted within the TSU for projects under implementation and it will be used for implementation of the proposed project as well. Defined controls and procedures have been applied in practice, and have been verified by the Bank's FM implementation support, and annual audits by private audit firms. Clean audit opinions on ongoing projects' financial statements have been issued by the auditors.

15. In general, key internal controls to be applied for the project include:

- appropriate authorizations and approvals;
- segregation of duties;
- different persons being responsible for different phases of transaction;
- reconciliations between records and actual balances, as well as with third parties should be performed on regular basis;
- complete original documentation should exist to support project transactions.

16. The Directorate of EE publishes tenders and is signatory to contracts related to activities supported under Components 2 and 3. MoH or MOE are signatory to contracts related to Component 1. After receiving an invoice, they forward it for verification to PIU's project manager or other institutions responsible for checking the quality and quantity of the delivery covered by the invoice. Independent consultants may also be contracted to perform verification that goods, services or works have been delivered to acceptable level prior to payments.

17. After the PIU's manager has approved the invoice in terms of quality and quantity of the work/service, the invoice is registered by the Archives by the TSU. The invoice is then reviewed by TSU finance officers who register the invoice in a simple log file with name of supplier, amount, and date of payment. They check the invoice, and find the appropriate budget from which the amount will be charged (contract number, item number and program (component), as well as relevant paragraph on which the invoice is based from the contract). After putting his/her initials, the invoice is given to the project procurement or technical staff for additional check. The staff checks the invoice against the relevant contract number, if necessary attaches a copy of the relevant paragraph on which the invoice is based from the contract and initials.

18. All relevant documentation need to be attached to the invoice enabling the Project manager to immediately check that the necessary checks have been performed. Payment orders and the invoice with all designated approvals and signatories are submitted for payment. Bank Statements are received daily and Treasury reports on regular basis by the TSU. Based on the Bank Statements/Treasury reports the TSU Financial Specialist will record the executed payments and perform due reconciliation of the bank balances. The TSU will

prepare IFRs listed above quarterly in the agreed format and submit the reports to the Bank. The reports will be the responsibility of the TSU Senior Financial Officer.

19. **Reporting and Monitoring.** Project management-oriented IFRs will be used for project monitoring and supervision. The format of the IFRs will be agreed during negotiation and attached to the Minutes of negotiation. The TSU will produce a full set of IFRs for each calendar quarter throughout the life of the project. They will be due 45 days after each quarter ends. The IFRs will comprise the following reports presented in the agreed format:

- Cash receipts and payments;
- Uses of Funds by Activity;
- Designated Account statement;
- Unit of Output by Activity;
- Narratives to the reports.

20. The accounting for the project is cash basis with additional information provided for commitments on signed contracts.

21. **External Audit**. The project financial statements will be audited in accordance with terms of reference acceptable to the Bank by a private sector audit firm acceptable to the Bank, and the audit report will be submitted to the Bank at the latest six months after the end of the period audited. The annual cost of the audits of the project will be covered by the project funds. The project financial statements are prepared on cash basis. Audits should be conducted in accordance with International Standards of Auditing. The project audit will be required to extend the scope with respect to grant lines to include performance review at least on a sample basis to ensure that agreed outputs are delivered in an efficient manner.

22. The following chart identifies the audit reports that will be required to be submitted by the project implementation agency together with the due date for submission.

Audit Report	Due Date
Entity financial statements	n/a
Project financial statements (PFS), including Statement of Expenses (SOE)s and Special/designated account. The PFSs include sources and uses of funds by category, by components and by financing source; SOE statements, Statement of designated account, notes to financial statements, reconciliation statement. The scope of audit will be extended to include performance review at least on a sample basis to ensure that agreed outputs are delivered in an efficient manner.	Within six months of the end of each fiscal year and at the closing of the project

Disbursements

23. **Funds Flow and Disbursement Arrangements**. Project funds will flow from the Bank either as an advance, via Designated Account to be opened in a commercial bank acceptable to the Bank to administer funds or by direct payment, on the basis of direct payment withdrawal applications. The Designated Account will be replenished under transaction based disbursement method, and managed as described below in the section on disbursement arrangements, *or* by direct payment based on direct payment withdrawal applications.

24. The TSU will operate the Designated Account based on the approved documentation for withdrawal/payments by authorized signatories. The TSU will prepare withdrawal applications for replenishment of the Designated Account which ought to be signed by designated signatories and will include a senior Government official of at least Director level. Payments from the Designated Account are executed by the means of payment orders. After all the procedures with respect to flow of documents, verifications and authorizations described in internal controls section have been applied, payment orders signed by designated signatories will be submitted for payments from either the Designated Account or request for direct payment. In the case of Direct Payment, the application form for such method payment is submitted to the Bank with the same authorized signatories as described above.

25. The ceiling for this Designated Account is defined in the DFIL. Documentation requirements for replenishment would follow standard Bank procedures as described in Disbursement Handbook. Monthly bank statements of the Designated Account, which have been reconciled, would accompany all replenishment requests.

26. Counterpart funding related to the energy cost savings will be further re-invested using WB procedures during the Project, and using applicable procedures when the project closes. Availability of funds for re-investment will be determined on an annual basis and reflected through the Annual Work Plan, thus also defining the co-financing ratio for the subsequent calendar year as well as the disbursement percentage to be used for the IBRD loan. Additional procedures with regards to energy cost saving model will be described in the Project Operations Manual, to be prepared by the client and the Annual Work Plan. The operations manual is expected to define detailed procedures on verifying and confirming the level of cost saving, modality of the Government's allocation of the said amount, use of the funds for re-investment, monitoring and supervision of the use of funds. During project implementation, inflows and outflows from the account opened by the Government for the purpose of energy cost saving, will be included in the project interim un-audited financial reports, and as such will be subject to the project audit.

Procurement

27. Procurement will be conducted according to the World Bank's Procurement Regulations for IPF Borrowers' (the Regulations), issued in July 2016, for the supply of goods, works, and non-consulting and consulting services, and the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, dated October 15, 2006 and revised in January 2011 and as of July 1, 2016. Under the new policy, the PPSD is used to analyze and determine the optimum procurement approach to deliver the right procurement result. The PPSD carried out for the project entailed a strategic assessment of the operating context and beneficiaries' capabilities, as well as the market, the different stakeholders, and the risks impacting procurement processes, and it informed the Procurement Plan.

28. Most of the civil works would involve open and limited National Competition (under Request for Bid method and Request for Quotation). The project will use the online tool STEP (Systematic Tracking of Exchanges

in Procurement).

29. **Project Procurement Strategy Development**. As per requirement of the Regulations, the PPSD has been developed and finalized after review by the Bank. Extensive market analysis has been carried out for different packages of procurement and based on the findings, decisions on packages and lots are finalized for civil works to ensure adequate participation of bidders. Consultancy contracts are also framed based on market research and packaging of the same in terms of scope of services are decided. Based on the PPSD, the procurement plan has been prepared to set out the selection methods to be followed by the Borrower during project implementation in the procurement of goods, works, non-consulting and consulting services financed by the Bank.

30. **Procurement Risk Analysis**

Risk Description	Description of Mitigation	Risk Owner
Limited contractors Unattractive size of contract	Strategizing in packaging of the procurement activities. Provide training to energy providers on understanding the procurement requirements of World Bank-financed projects.	MEEP2 PIU, TSU, MoH, EE contractors
Unavailability of materials locally and delays in supplies stocks	Work closely with energy service providers to inform them about MEEP2 procurement timeframes when sourcing materials and support the fast-tracking of the processes is of importance. Work with energy service providers to ensure that proper planning is undertaken when planning to source materials and supplies.	MEEP2 PIU, TSU, MoH, EE contractors
Possible relocation of funds due to unforeseen activities	Foster coordination between PIU and Ministry.	MEEP2 PIU, MoE

Procurement and implementation delays	Established qualified and motivated Evaluation Committees. Close cooperation between MEEP/PIU/TSU to monitor contract awards and contract implementation.	MoE, MoH, PIU, TSU

Procurement Objectives

Objectives of related stakeholders

Stakeholder	Interest	Objectives of stakeholders can be achieved through procurement
World Bank	Consulted, Informed	To ensure timely implementation of the Project and that Project objectives are met. To ensure that value for money is achieved from the procurements made under the project.
PIU	Responsible and Accountable	To ensure that the timely preparation and implementation of procurements according to the defined procedures (Operations Manual), in collaboration with TSU.
TSU	Responsible and Accountable	To ensure that procurement process is conducted in accordance with Procurement framework.
Ministry of Economy	Responsible and Accountable	To increase their capacity to provide service to the EE sector. To ensure timely implementation of the Project and that Project objectives are met.
Ministry of Health	Responsible and Accountable	To ensure timely implementation of the Project and that Project objectives are met.
Ministry of Finance	Responsible and Accountable	To allocate the reported amount of the energy savings achieved (as per M&V report) as part of the annual budget process.
Beneficiaries	Consulted and Informed	To be able to extract maximum benefit from the project objectives in order to increase EE.
Contractors/Suppliers	Responsible, Accountable, Consulted	To get equal and fair access to participation in the bidding processes. To provide national language for tender documentation, where it is appropriate, for example where Request for Quotation is used, smaller works and basically where national market approach is used. To implement successfully the assigned contracts.

31. **Project Procurement Development Objectives (PPDO**). The project procurement development objectives are the following:

- To ensure procurement efficiency and ensure value for money that contributes to EE in public buildings;
- To ensure appropriate market participation in relatively low to medium value civil works that are critical for realizing project development objectives;
- Procurement process and contracting are timely completed in selected public health buildings;
- Health objects are adapted within budgets, timelines and standards required by the legislation and MEEP2;
- Capacities of implementing agencies' staff on procurement framework is built;
- Trained local bidders on World Bank-financed procurement processes. Ensure an open, transparent and compliant process; and
- Achieve value for money in all procurement activities.

32. **Project Procurement Result Indicators**. The achievement of the PPDO will be measured by the following indicators:

(a) Reduction in rebidding cases by 50 percent compared with the predecessor MEEP;
(b) Timely completion of major contracts by 75 percent.

33. **Key procurement under the project.** The following procurement activities are anticipated under the project:

1. *EE investments in selected public health sector buildings, including works and goods*

For above works, proposed selection method is Request for Bids (One-Envelope Bidding Process), using Qualifying criteria- the lowest evaluated cost. Proposed market approach is national market, given that these are relatively small contracts, and it is developed national market. Activities are labor intensive, and so far for all small works, none or very limited interest of international, or even companies from region is recorded.

2. *Related technical services, including performance of energy audits, preparation of designs, technical monitoring and evaluation, performance of works supervisions, energy performance certificate in all facilities renovated by MEEP,*

With regards to the technical services, proposed procurement methodology is Quality and Cost-based Selection with open market approach, to engage one Consultant (for a selected set of facilities) to perform all technical tasks, including: preparation of detail energy audit, technical design, technical monitoring and evaluation, energy certificate of buildings and work supervision services.

3. *Preparation of social monitoring before and after the EE building renovations*

The social survey company will be selected using Consultant's qualification, in local market there are sufficient companies who have similar experience, and therefore national market approach will be used.

4. *Installation of monitoring equipment in up to 150 health sector buildings*

Related to procurement of monitoring equipment, there is no local producers of this equipment, but local market of distributors is developed. Local companies specialized in thermo-technical works and electrical installations represent most of important international manufacturers. Proposed selection method is Request for Bids (One-Envelope Bidding Process). Best approach for this procurement is to approach

national market.

5. *Technical assistance to operationalize EE financing mechanism*

For Technical assistance to operationalize EE financing mechanism consultant will be selected using Consultant's qualification, in international market, given that local market is not particular developed to provide this service, and therefore open market approach will be used.

6. *Communication and awareness campaign*

For implementation of the communication and awareness campaign there are many local companies who are experienced in providing this kind of service so proposed methodology is Consultant's Qualification with national market approach.

7. *Project implementation support*

Considering the actual arrangements of MEEP AF project, MEEP2 will build upon these arrangements to make good use of the existing project manager in the PIU. This proposal derives from the actual tasks of the Project manager which will remain the same for MEEP2.

Also, TSU is established for fiduciary aspect of the project and given previous experience and actual project portfolio, there is no expectation that additional staffing is needed for TSU.

For (part-time) technical EE expert, there are available experts who performed same service in previous projects financed by the World Bank, as well others who have experience in this area for project financed by other institution, so expectation is that very qualified and experience expert will show interest for this position.

8. *Financial audit*

For performing financial audit there are local accounting companies who are experienced in providing this kind of service. Given previous experience and practice, financial audit will be performed for all project by one company, and proposed methodology will be Least Cost Based Selection with national market approach.

34. **Prior Review threshold***:* **Procurement methods and thresholds.** The procurement plan shall set forth those contracts which shall be subject to the World Bank's mandatory Prior Review. It is proposed to follow the procurement thresholds applicable effective July 2016, as part of the new procurement framework, which will be applied with any reduction or enhancement of the threshold levels. All other contracts shall be subject to post review by the World Bank. The prior review thresholds will be periodically reviewed and revised as needed during the project implementation period based on implementation of risk mitigation measures, reports from procurement post-reviews, and improved capacity of the implementing agency. Based on the satisfactory assessment, the project shall be subject to *moderate risk* prior review threshold, making the project mostly subject to post review.

Expenditure Category	Contract Value (US$)	Procurement Method	Bank Prior Review

Civil Works	>= 5,000,000	RFB/ International	All >/=US$15 million contracts
	< 5,000,000	RfB/ National	
	<200,000	RfQ/ National	
	NA	DC	all
Goods	>= 1,000,000	RfB/International	All >/=US$4 million contracts
	<1,000,000	RfB/National	First contract
	<100,000	RfQ/ National	First contract
	NA	DC	all
Consultant Services	NA	QCBS, QBS, FBS, LCS and CQS*	**>/= USD 2 million; all SSS >/=US$400,000 for IC**
	NA	SSS	
	NA	IC	

Notes:
RFB– Request for Bid
RfQ – Request for Quotation
DC – Direct Contracting
QCBS – Quality and Cost Based Selection
QBS – Quality Based Selection
FBS – Fixed Budget Selection
LCS – Least Cost Selection
*CQS – Selection Based on Consultants' Qualification below $300,000 depending on the nature of assignment
SSS – Single (or Sole) Source Selection
IC – Individual Consultant selection procedure
NA – Not Applicable

35. **All Terms of References (TORs**) are subject to the Bank's prior review irrespective of prior/post review status.

36. **Client Capability and MEEP2 PIU Assessment.** MEEP2 will be assisted by a PIU that will comprise two staff, the Project manager (full time) and technical EE expert (part time). The Project manager will be responsible for management of the project, compiling progress and evaluation reports on project implementation and associated results after their completion and will support the PSC in carrying out its coordination responsibilities. The project manager for MEEP2 will remain the same as it was for MEEP. Technical EE expert will be engaged on time part basis and it will be responsible for reviewing all technical documentation, providing support during bid evaluation process and site visits control. In addition, local consultants may be utilized for short assignments to conduct technical and social surveys and monitoring, revision of technical documentation, and for finance audit.

37. The TSU has sufficient experience on World Bank procurement procedures and has shown satisfactory performance on procurement for Bank financed projects. The TSU has a solid management structure and is staffed with adequate and experienced procurement and financial management

specialists. Diligence is also observed in record keeping and quality of evaluation. The TSU is familiar with Bank's bidding documents and procedures, and was trained on the new procurement framework.

38. **Summary of PPSD to inform the Bank's preparation of the PAD.** A summary of the recommended Procurement Plan for the activities included in the project is provided in the Table below. The Procurement Plan will be updated in agreement with the Bank annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. The Procurement Plan and all its updates shall be subject to the Bank's "Prior Review" and No Objection before implementation. The Procurement Plan and all subsequent updates will be uploaded to STEP and published in the Bank's external website.

Contract Title, Description Category	Category	Singly/ Multiple	Bank Oversight	Procurement Approach	Selection method	Evaluation Method
	Component 1 – Energy efficiency improvements in public sector buildings					
EE investments in selected public health sector buildings, including works and goods (multi packages)	Works	Multiple	post	National	Request for Bids-Small Works (One-Envelope Bidding Process)	Qualifying criteria- the lowest evaluated cost
Related technical services, including performance of energy audits,	Consulting service	1	Post	Open	Quality and Cost-based Selection	Shortlisting
Preparation of social monitoring before and after the EE building renovations	Consulting service	1	Post	National	Consultants' qualification	Shortlisting

Installation of monitoring equipment in up to 150 health sector buildings	Goods	1	Post	National	Request for Bids-Goods (One-Envelope Bidding Process)	Qualifying criteria- the lowest evaluated cost
	Component 2 – Capacity building					
Technical assistance to operationalize EE financing mechanism	Consulting service	1	Post	Open	Consultants' qualification	Shortlisting
Capacity building to key stakeholders		1			Training	
Communicatio n and awareness campaign	Consulting service	1	Post	National	Consultants' qualification	Shortlisting
	Component 3 – Project implementation support					
Project Manager	Consulting service	1	Post		Direct Selection	
Technical EE expert (part-time)	Consulting service	1	Prior	Open	Individual consultant	Shortlisting
Financial audit	Consulting service	1	Prior	Open	Least Cost Based Selection	Shortlisting

39. **Advertisements**. A General Procurement Notice (GPN) will be published online on the UNDB website. Specific Procurement Notices (SPN) will be published as the corresponding bid documents become available.

40. **Debarments.** The Borrower will respect debarment decisions by the Bank and will exclude debarred firms and individuals from the participation in the competition for Bank-financed contracts. Current listing of such firms and individuals can be found at the following website address: http://www.worldbank.org;/debarr

41. **Assessment of the Agency's capacity to implement procurement**. The Bank team carried out an assessment of the procurement capacities of TSU and MoE in September 2017. The assessment took into consideration the current capacity of TSU, including a review of the organizational structure of Directorate for EE under the MoE as well as the necessary interaction between TSU staff responsible for procurement and the Directorate for EE. The assessment concluded that: (i) the TSU will be directly responsible for procurement related to all works, goods, and consulting and non-consulting services; (ii) the TSU has sufficient experience on World Bank procurement procedures and has shown satisfactory performance on procurement for Bank-financed projects; and (iii) the TSU has a solid management structure and is staffed with adequate and

experienced procurement and financial management specialists. Diligence is also observed in record keeping and quality of evaluation. The procurement processing and contract management was rated satisfactory. The implementing agency is familiar with the Bank's bidding documents and procedures and was trained on the new procurement framework.

42. **Frequency of Procurement Supervision.** In addition to the prior review supervision to be carried out by the Bank team, the capacity assessment of the Implementing Agency recommends supervision missions every six months during the first year of implementation, and once every subsequent year. Post reviews will be carried out regularly with a minimum sampling of one into ten.

Environmental and Social (including safeguards)

43. **Environmental safeguards**. The project is rated environmental category B as per Operational Policy OP/BP 4.01. The main activities of the Project relate to EE measures that will be undertaken through civil works in 15 to 20 selected public buildings throughout Montenegro. It is not planned that the existing footprint of related buildings will be expanded. The project will not fund activities related to construction of new buildings. All buildings are located in urban centers. No category A-type subprojects nor category A-type activities will be implemented within the project. No works will be undertaken in nature protected areas.

44. Implementation of Project-funded activities is not expected to have any significant negative environmental impact. The complexity of civil works will range from internal 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. The environmental risks and issues related to the Project-funded activities include noise, dust, vibrations, material managemnt, potential incidentall pollution of soil and water, and management of construction waste during civil engineering activities - which could be successfully managed and mitigated by application of good engineering practice. Other risks, although not likely to be encountered on more than a few sites, may include hazardous material/waste, such as asbestos insulation or crude oil waste in fuel tanks, which will be dealt by the licensed contractors. Specific issues that will also be taken care of relate to management of the sites (as health centers need to continue operating during the works execution), and general health and safety of population that uses these structures.

45. An ESMF including, among others, generic Environmental Management Plan (EMP), sample Environmental Checklist, Grievance Redress Mechanism, legal and institutional implementation arrangements had been prepared by the Borrower. Site-specific EMPs and Environmental Checklist will be prepared during project implementation for each specific health center - which will become part of the bidding documents and resulting civil works contracts.

46. The MoE has almost 10 years of experience in implementing World Bank-funded projects. Currently, it is implementing MEEP (P107992) which includes implementation of EE related civil works and other measures in publicly owned buildings - schools, hospitals and municipal medical centers. The PIU has experience in dealing with environmentally-related issues, and is aware of the current World Bank environmental policies. The PIU will, during Project implementation, be staffed with a part-time environmental expert, whose duties will include among others: (i) completion of Environmental Checklists and preparation of site-specific EMPs; (ii) incorporation of Final EMPs, after the Bank's approval, into respective tender documents; (iii) monitoring and reporting on compliance with site-specific EMPs; (iv) reporting on compliance with EMPs and ESMF to the Bank. Monitoring and reporting on contractor's compliance with site-specific EMPs will be undertaken on a monthly

basis by the supervising engineer/environmental specialist and reports sent to the Project Implementation Team (PIT). Reporting from PIT to the Bank will be undertaken at least twice per calendar year, and more frequently in case of any systematic or specific problems. Review of the environmental compliance reports and reality check on few sites determined on a sample basis will be undertaken by the Bank's safeguards specialist at least once per year, during the regular implementation support missions.

47. Draft ESMF was prepared, approved and disclosed in-country in February 2018. Final ESMF was submitted to the Bank and approved on March 6, 2018.

48. **Social Safeguards.** Social impacts are expected to be positive overall. EE investments in selected health care facilities will benefit patients and staff through enhanced comfort levels and a better working and recovery environment. As the project envisages retrofitting already existing public buildings within their existing footprint, no acquisition of land, displacement of people, or any other adverse social impacts (such as loss of assets, loss of income due to retrofitting works, loss of jobs) are expected. 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 Operational Manual will explicitly indicate that any subproject which would require land acquisition or involuntary resettlement will be excluded from funding. Further social issues linked to the retrofitting activities (such as facility user safety; workers' safety; and traffic and pedestrian safety), have been included in the ESMF, and will also feature in the building-specific EMP. The social outcomes of the project will also be monitored by the social monitoring surveys which will be conducted before and after the retrofitting works.

49. **Citizen engagement**. Social monitoring surveys will be used as citizen engagement mechanism to capture end-user feedback. The surveys will collect data from patients and professionals working in facilities selected on a sample basis. Questions to be included will likely encompass subjective evaluations of comfort levels, quality of windows, joinery, heating systems, air, lighting, etc. The surveys will also be instrumental in capturing changes in awareness/knowledge levels about EE and individual attitudes towards the adoption of EE measures in citizens' own homes. The project is characterized by citizen-oriented design, as surveys conducted prior to the refurbishments will allow the project to address recommendations from beneficiaries that may be relevant to include in the retrofitting works (e.g. wheelchair accessibility), in line with the CPF's Citizen Engagement Roadmap FY16-20 for Montenegro. It is planned that the survey will include a question related to users' evaluation of the project's citizen-oriented design, such as for instance "Do you feel that the retrofits were centered on citizens' needs?". Furthermore, survey results will be disaggregated by vulnerability markers (such as age, income group or employment status for example) to analyze possible variations in answer patterns and draw up recommendations specific to certain vulnerable groups. The results framework includes the beneficiary feedback indicator "percentage of project beneficiaries reporting an improvement in building comfort level, disaggregated by gender", which is closely linked to the PDO. In addition, the communication and awareness-raising campaign on EE will promote the surveys' and the project's achieved results (e.g. public discussion and dissemination of survey results, creation of online and offline communication materials), including to feed back to beneficiaries how relevant recommendations have been addressed and integrated in the retrofitting works. The communications and awareness raising campaign will be timed and carried out in order to maximize outreach and sensitization of end-users to the topic of EE and to highlight project results. It will be an important tool to spread knowledge about the benefits of EE and contribute to behavior changes in the population regarding energy usage.

50. **Gender**. Although the project will benefit women and men equally through the retrofits, existing data suggests that there is a gap between males and females regarding awareness and knowledge levels of EE in the country. Early results from the social monitoring survey for the MEEP, i.e. data from 400 patients (200 men and 200 women) *before* the retrofitting works, reveal that while on average 61 percent of men had heard about EE, only 46 percent of women had. This suggests that men are generally better informed of topics related to EE and the construction sector. Consequently, the project will use the communication and awareness-raising campaign to provide gender-sensitive information to beneficiaries and conduct specific outreach activities to reduce this gap. The project will also support training on operation and maintenance of retrofitted buildings, including recommendations on behavior changes that help to save energy. Efforts will be made to ensure proper representation of female staff in the training. These actions will contribute to closing the gap between males and females in terms of "voice and agency", one of the four pillars of the World Bank Group Gender Strategy 2016-2023: as women become more aware of EE concepts, they become better equipped to make decisions about their own lives and act on them to achieve desired outcomes. This is even more important as women tend to be underrepresented in the energy field and might forego some employment opportunities in this expanding sector of the economy due to a low awareness of EE concepts and applications. Ensuring that women are familiar with EE and its implications (both at the individual level and in the job market) therefore constitutes a first step towards allowing them to make well-informed decisions regarding their households and professional trajectories. Lastly, the social monitoring surveys will have an equal representation of female and male respondents, and reports will analyze data disaggregated by gender and social dimensions to reflect evolutions in women's awareness and knowledge about EE. The results framework includes the following intermediate result indicator: "increase in women's awareness of EE".

51. **GRM**. Based on the experience of the MEEP, it appears that the risk of project-related grievances is low. During the previous phase of the project and its additional financing, no grievance was reported. However, possible complaints from project-affected people may arise in relation to the EE retrofit works (e.g. high noise, increased dust emissions). As part of MEEP2, the primary grievance focal point will be the site manager appointed by contractors, who will be responsible for relations with the local population and handling possible complaints. Contact information to this person will be made available to the public at all locations where the works are being performed. Contracts shall specify that all complaints received by contractors should be communicated to the PIU Project manager. Project-affected people will also be able to file a grievance personally, verbally by telephone, or in writing through e-mail, post, fax or personal delivery to a designated MEEP2 team project specialist (team engineer), whose name, postal address, e-mail address, phone and fax number will be included in particular EMPs. Should complainants be dissatisfied with the outcome of the first-level grievance redress process, they will have the possibility to appeal to the MEEP2 Project manager, whose postal address is: Rimski trg 46, Podgorica, and whose email address, and phone and fax numbers will be included in particular ESMPs. Grievances will be systematically acknowledged: an interim reply will be sent within three working days of receipt and will provide the complainant with basic information about next steps. This will be followed by an investigation stage, and the communication of a suggested grievance resolution to the complainant in writing within one month of the grievance receipt. The grievance will be considered "closed" after the implementation of the resolution has been verified. The Project manager will add all complaints received to a grievance log recording the following elements: date the grievance was received; channel through which the grievance was received; gender of the complainant; location concerned by the grievance (city and health facility); brief description of grievance; classification/type of grievance; date an acknowledgement was sent to the complainant; description of actions taken (investigation, corrective measures); current status of grievance (e.g. pending due to investigation, closed); date of resolution suggestion sent to complainant. Project-

affected people may also submit complaints to the municipal police or to the environmental inspection body. All complaints submitted to the municipalities and/or inspection bodies also need to be communicated to the Project manager, who will add them to the grievance log. The PIU shall inform the Bank immediately of any grievance received.

Monitoring and Evaluation

52. **M&E arrangements**. The PIU will be responsible for day-to-day M&E of implementation progress under each component and related results achieved, including indicators specified in Section VII. To this end, the PIU will establish a simple information management system for M&E to systematically track progress on different aspects of project implementation. The PIU will prepare a semi-annual progress report to the PSC and the World Bank for review. In addition to regular implementation support missions (see Annex 3), a mid-term review will be carried out by the World Bank team to assess the overall project progress, identify critical implementation issues and make necessary adjustments to the project design, its components or implementation schedule.

53. **Main information sources**. The main sources for M&E include: energy audit and commissioning reports; technical M&V reports of energy and cost savings achieved; and social monitoring and evaluation reports. The latter will involve beneficiary surveys in the retrofitted facilities to assess improvements in terms of end-user satisfaction and to capture other social co-benefits generated through the EE investment. The surveys among patients will be carried out in a gender-sensitive way, i.e. with an equal number of men and women respondents. Given the higher representation of women among health care staff, the responses of employees will be collected and analyzed separately and may include some qualitative data, collected for example through interviews or focus groups. Results will be disaggregated by gender and examine possible changes in women's awareness and willingness to improve EE in their homes before and after the retrofits. The Terms of Reference for the social monitoring work will include the requirement to integrate a gender-based analysis section in the social monitoring reports. One of the intermediate results indicators is the increase in women's awareness of EE in a selected sample of the health care facilities where EE investments have been carried out.

Role of Partners

54. **KfW**. KfW has provided €36.2 million for EE investments in schools which is complementary to MEEP and MEEP2 investments in health care facilities. The investments are being implemented under the Energy Efficiency Programme in Public Buildings. KfW is also financing the implementation of a central energy consumption monitoring system for public buildings, which will be *inter alia* populated by data from monitoring equipment (e.g. electricity, heat and water meters, temperature sensors, and data processors) planned to be installed under Component 1 for the largest energy consumers in the health sector, including buildings retrofitted under MEEP and MEEP2. KfW and the Government are at the early stage of discussing the preparation of a €50 million follow-up EE operating in the education and social buildings sector. Based on discussions during MEEP2 preparation, KfW expressed interest in replicating the energy savings capture model to the planned follow-up operation, subject to the Government's approval and support. Both MoE and the Ministry of Education also confirmed their willingness to replicate the energy savings model on the basis of the results achieved and procedures established under MEEP2.

55. **UNDP.** UNDP is providing support to the Ministry of Sustainable Development and Tourism to set up the ECO Fund, including management structures and procedures, sources of funds, initial staffing requirements and defining the scope of environmental protection activities to be assumed by the Fund. The ECO Fund is one of

the institutional options for hosting and operating the long term sustainable EE financing framework which will be developed under Component 2 of the proposed project. A decision by the Government on the establishment and operational modalities of the ECO Fund, including its mandate in the area of EE, is expected by June 2018. UNDP has committed its follow-up support to help develop the business plan and operational procedures for the Funds' activities in the area of environmental protection. Subject to the decision by the Government on EE activities to be operated through the Fund, MEEP2 could complement technical assistance support required for setting-up the implementation and operational arrangements for EE investments.

56. **EBRD.** EBRD is supporting MoE to develop an ESCO legal framework, and a public private partnership (PPP) law. Results achieved and lessons learned will be taken into account when designing the sustainable EE financing framework to be developed under Component 2 of the project. Through WeBSEFF, EBRD is also providing a credit line to the SME sector through local participating banks.

57. **EU.** IPA II for the period 2014-2020 allocates an indicative amount of €270.5 million to Montenegro. Environment and Climate Action figures among the strategic priority areas under IPA II with a notional allocation of €37.5 million by 2020. As part of this priority area, the EU is inter alia planning to support sustainable EE financing approaches. The EU will be a key partner during preparation and implementation of the project, especially with regards to the development and operationalization of the sustainable EE investment framework. The close collaboration with the EU will also build on the strong partnership between the Bank and the EU in supporting Governments in the Western Balkans to establish scalable and sustainable EE financing mechanisms (e.g. Kosovo and FYR Macedonia).

58. **Others.** The Luxembourg Agency for Development Cooperation and Norwegian Government provided a €130,000 and €390,000 grant, respectively, for the *Energy Wood program*. The program provides interest-free loans (up to €3,500, with a repayment period of up to 5 years) for the purchase and installation of modern biomass heating systems. The UNEP and IMELS provided a US$1 million credit line to install solar water heaters in selected Montenegrin households under the *MonteSol Program*. The program provides interest free loans up to €5,000 which are repayable over 7 years. Both programs focus on the residential sector, and are complementary to MEEP2's focus on the public buildings sector.

ANNEX 3: IMPLEMENTATION SUPPORT PLAN

COUNTRY : Montenegro
Montenegro Second Energy Efficiency Project

Strategy and Approach for Implementation Support

1. The Implementation Support Plan (ISP) aims to support the Government in achieving the PDO of the project. The ISP is based on the risks and mitigation measures identified in the Systematic Operations Risk-Rating Tool (SORT) and aims to provide flexible and effective implementation support to the Directorate for EE and its PIU, the TSU, and other key stakeholders

2. The Project team will provide timely and effective implementation support through regular missions (i.e. within six months from the Project effectiveness date, and at appropriate intervals thereafter). The team will monitor the M&E of Project results, facilitate implementation of risk mitigation measures identified in the SORT, and provide technical advice to the MoE, PIU, TSU, and other key project stakeholders involved on fiduciary requirements, safeguards, operations and technical aspects of Project implementation. The Project team consists of both headquarters- and regionally-based staff to ensure an appropriate mix of sectoral, operational, country and fiduciary experts. The team will conduct an extensive mid-term review and provide the following implementation support through a combination of field visits and regular exchanges using different communication channels, including video- and audio-conferences as well as regular email exchange.

Implementation Support Plan and Resource Requirements

3. **Technical support.** Technical implementation support will be provided by the Task Team Leaders and EE specialists throughout project implementation with focus on: (i) preparation of Terms of Reference for key assignments and review of related outputs; (ii) development and implementation of the energy savings capture model and related M&V; (iii) review of technical specifications for proposed EE measures for a sample set of bidding documents; (iv) guidance on implementation issues and participation in site-supervision visits; and (v) broader policy dialogue as well as sharing of international experience on EE in public buildings.

4. **FM support.** During project implementation, the Bank will supervise the project's FM arrangements in two main ways: (i) review the project's IFRs for each calendar quarter, as well as the project's annual audited financial statements and auditor's management letter; and (ii) perform on-site supervisions, review the project's FM and disbursement arrangements to ensure compliance with the Bank's minimum requirements. The on-site supervision will include monitoring of agreed actions, review of randomly selected transactions, review of internal controls, and other specific supervision activities. Supervision will be performed by the Bank accredited FM Specialist.

5. **Procurement support.** The project team will conduct risk-based implementation support to supervise procurement arrangements in the following ways: (i) providing detailed guidance on the Bank's new Procurement Guidelines to the TSU; (ii) conducting prior and/or post-review of procurement documents, including timely comments and suggestions for improvements; and (iii) monitoring procurement progresses against the procurement plan.

6. **Social support.** The Bank's Social Development Specialist will provide support to the PIU and/or social consultants regarding the social monitoring survey design, data collection, analysis and reporting, as well as

gender-sensitive communication materials. Support provided will also entail possible grievance monitoring and any social safeguards-related questions.

7. **Environmental safeguards support**. The Bank's Environmental Safeguards Specialist will provide the following implementation support: (i) review safeguards compliance, including the applications of EMPs especially during the initial phase of project implementation and site-visits of retrofitted facilities; and (ii) provided guidance and training on environmental safeguards-related issues and questions on an as-needed basis.

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	Task management, technical, fiduciary, environmental safeguards	Management, technical, fiduciary, safeguards	120,000	
12-48 months	Task management, technical, fiduciary, environmental safeguards, FM, social, M&E	Technical, fiduciary, safeguards, M&E, social	100,000/year	
Other				

Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Project management	6-8	2-3	HQ
Technical EE expert	4-6	2-3	HQ
Procurement Specialist	4	2	Regional
FM Specialist	3	2	Regional
Environmental safeguards	2	2	Regional
Social Safeguards/CE	2	2	Regional

Partners

Name	Institution/Country	Role