

**DOCUMENT OF THE EUROPEAN BANK  
FOR RECONSTRUCTION AND DEVELOPMENT**

Approved by the Board of Directors on 11 December 2024<sup>1</sup>

**SERBIA**

**SERBIA AIR QUALITY IMPROVEMENT PROJECT**

*[Redacted in line with the EBRD's Access to Information Policy]*

*[Information considered confidential has been removed from this document in accordance with the EBRD's Access to Information Policy (AIP). Such removed information is considered confidential because it falls under one of the provisions of Section III, paragraph 2 of the AIP]*

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<sup>1</sup> As per section 1.4.8 of EBRD's Directive on Access to Information (2019), the Bank shall disclose Board reports for State Sector Projects within 30 calendar days of approval of the relevant Project by the Board of Directors. Confidential information has been removed from the Board report.

For the avoidance of any doubt, the information set out here was accurate as at the date of preparation of this document, prior to consideration and approval of the project.



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## ABBREVIATIONS / CURRENCY CONVERSIONS

AST	Above Ground Storage Tank
CO <sub>2</sub>	Carbon dioxide
CO	Carbon Monoxide
CP	Conditions Precedent
CPI	Consumer Price Index
DH	District Heating
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
ESAP	Environmental and Social Action Plan
ESDD	Environmental and Social Due Diligence
EUR	Euro
ETI	Expected Transition Impact
FDI	Foreign Direct Investment
FS	Feasibility Study
GHG	Greenhouse Gases
HFO	Heavy Fuel Oil
IFI	International Financial Institution
IMF	International Monetary Fund
KT	Kilo-tonne
LSG	Local Self Government
LGD	Loss Given Default
M	Million
MEI	Municipal and Environmental Infrastructure
MEP	Ministry of Environmental Protection
MoF	Ministry of Finance
MW	Mega-Watt
MWh	Mega-Watt-hour
NO <sub>x</sub>	Nitrogen Oxides
PIP	Priority Investment Period
PIU	Project Implementation Unit
PM	Particulate Matter
PP&R	Bank's Procurement Policy & Rules
PR	Bank's Performance Requirements
PV	Photovoltaic
RAROC	Risk-Adjusted Return On Capital
ReDEWeB	Renewable District Energy in the Western Balkans Programme
RoS	Republic of Serbia
RSD	Serbian Dinar
SBA	Stand-by Arrangement
SIDA	Swedish International Development Cooperation Agency
SO <sub>x</sub>	Sulphur Oxides
SO <sub>2</sub>	Sulphur Dioxide
STEM	Science, Technology, Engineering and Mathematics
SSF	Shareholder Special Fund
TC	Technical Cooperation
TI	Transition Impact
UST	Under Ground Storage Tank

**1 EUR = 117.0 RSD (October 2024)**

## **PRESIDENT’S RECOMMENDATION**

This recommendation and the attached Report concerning an operation in favour of the Republic of Serbia (“RoS” or the “Borrower”) are submitted for consideration by the Board of Directors.

The facility will consist of a sovereign loan to the RoS in the amount of up to EUR 50 million to finance investments for the decommissioning of environmentally harmful boiler houses in six local self-governments (“LSGs”) in Serbia, as well as investments into sustainable heat sources (including heat pumps and wood biomass) (the “Project”). The facility will also enable connections to the district heating network and preparation of the project documentation for subsequent phases of the Project.

The Project will support Serbia’s efforts to improve the air quality in the country, which is among the worst in Europe. The Project is expected to significantly reduce CO<sub>2</sub> emissions across Serbia, reduce the share of imported energy sources and total energy costs for public users. Furthermore, the Project will support the transition to low-carbon methods of delivering thermal energy, which is a key step towards the decarbonization of the heating and cooling sector and a high priority under the Growth Plan and Reform Agenda of the European Union (“EU”) for the Western Balkans. Moreover, the Project will also support the Borrower in the implementation of the “Air Protection Program in the Republic of Serbia for the period 2022-2030 Action Plan”, which was adopted by the Government in December 2022.

The expected transition impact of the Project stems primarily from (i) the *Green* transition quality under the Bank’s Green Economy Transition (“GET”) Approach as 90% of the use of proceeds will contribute to a significant reduction of greenhouse gas (“GHG”) emissions and other pollutants, and (ii) the *Competitive* transition quality as the Project promotes significant cost efficiency improvements which will lead to heat production cost savings. The Project is also Gender Additional through the promotion of equal opportunities and women’s participation in the energy sector in Serbia.

Technical Cooperation (“TC”) support for this operation has been provided by the Renewable District Energy in the Western Balkans Programme (“ReDEWeB”), the Swedish International Development Cooperation Agency (“SIDA”) and EBRD’s Shareholder Special Fund (“SSF”).

I am satisfied that the operation is consistent with the Bank’s Strategy for Serbia, the Bank’s Municipal and Environmental Infrastructure (“MEI”) Sector Strategy (BDS19-069(F)), the Bank’s GET Approach 2021-2025, the Strategy for the Promotion of Gender Equality and with the Agreement Establishing the Bank.

I recommend that the Board approve the proposed loan substantially on the terms of the attached Report.

**Odile Renaud-Basso**

## BOARD DECISION SHEET

SERBIA – Serbia Air Quality Improvement Project – DTM 55263	
<b>Transaction / Board Decision</b>	Board approval <sup>2</sup> is sought for a sovereign loan in the amount of up to EUR 50 million in favour of the Republic of Serbia (“ <b>RoS</b> ” or the “ <b>Borrower</b> ”) represented by the Ministry of Finance (the “ <b>MoF</b> ”) to finance the decommissioning of environmentally harmful boiler houses in six local self-governments (“ <b>LSGs</b> ”) in Serbia as well as investments into sustainable heat sources (including heat pumps and biomass wood heat generation) (the “ <b>Project</b> ”). The proceeds of the loan will also be used to facilitate connection to the district heating (“ <b>DH</b> ”) network and preparation of the project documentation for subsequent phases of the Project.
<b>Client</b>	The Client and Borrower is the RoS represented by the MoF. The Project will be implemented by the Ministry of Environmental Protection of Serbia (“ <b>MEP</b> ”) as the responsible line ministry for the Project. The beneficiaries will be several public entities at the central and local level in charge of operation of polluting boiler houses (ministries, public companies, academic institutions, etc.) located in six highly polluted LSGs, namely, Belgrade, Smederevo, Nis, Zajecar, Valjevo and Novi Pazar.
<b>Main Elements of the Proposal</b>	<b>Transition impact:</b> Primary Quality – <i>Green</i> : The Project will replace approximately 70,430 MWh of heat currently generated from coal and oil incineration with renewable/waste heat utilization of approximately 59,750 MWh and an additional supply from the existing DH system amounting to approximately 17,940 MWh. The Project will lead to a significant GHG reduction, lowering CO <sub>2</sub> emissions by 18kt per year, which represents an 81% reduction compared to the baseline. It will also substantially reduce other air pollutants from polluting boiler houses, including 27 tonnes of NO <sub>x</sub> , 46 tonnes of SO <sub>x</sub> , 9 tonnes of CO, and 10 tonnes of particulate matter (PM). Secondary Quality – <i>Competitive</i> : The Project promotes significant cost efficiency improvements which will lead to heat production cost savings in the amount of above EUR 2 million per year (or more than 50% of total heat production cost). <b>Additionality:</b> The Bank's additionality is derived from the following: (i) the Bank offers longer-term financing that is not available in the market from commercial sources on reasonable terms and conditions necessary to structure this investment project; (ii) the Bank helps the Client to mitigate carbon transition risks and take climate action, such as moving along a low carbon transition pathway; (iii) the Bank will provide its expertise on higher environmental standards and energy and resource efficiency and climate resilience, (vi) the Bank will help set standards to promote equal opportunities and women's participation in the energy sector (Gender SMART) and, (vii) the Bank will strengthen the capacity of the Client. <b>Sound banking:</b> Sovereign loan.
<b>Key Risks</b>	(i) <b>Sovereign and macro-economic risk</b> , mitigated by the positive track record in terms of macroeconomic stability of the country and its good country rating, and, (ii) <b>Implementation risk</b> mitigated by the appointment of a project implementation unit (“ <b>PIU</b> ”) supported by an independent project implementation and works supervision consultant to ensure smooth implementation in line the EBRD's Procurement Policies and Rules (“ <b>PP&amp;Rs</b> ”).
<b>Strategic Fit Summary</b>	The Project is consistent with (i) the Bank's Municipal and Environmental Infrastructure (“ <b>MEI</b> ”) Sector Strategy, (ii) the Bank's Country Strategy for Serbia, the Strategy for the Promotion of Gender Equality and (iii) the Green Economy Transition (“ <b>GET</b> ”) Approach 2021-2025.

<sup>2</sup> Article 27 of the AEB provides the basis for this decision.

## ADDITIONAL SUMMARY TERMS FACTSHEET

<b>EBRD Transaction</b>	A sovereign loan in the amount of up to EUR 50 million to the RoS, represented by the MoF to finance decommissioning of environmentally harmful boiler houses, investments into sustainable heat sources and connections to the DH network in six LSGs in Serbia. The Project will be implemented by the MEP as the line ministry responsible for the Project.
<b>Existing Exposure</b>	The Bank's total sovereign portfolio exposure in Serbia as of end of September 2024 was EUR 1,159.7 billion [REDACTED]
<b>Maturity / Exit / Repayment</b>	15-year tenor [REDACTED]
<b>Potential AMI eligible financing</b>	None.
<b>Use of Proceeds - Description</b>	<p>The loan proceeds will be used to finance investments in the decommissioning of environmentally harmful boiler houses, investments into sustainable heat sources (including heat pumps and wood biomass) and connections to the DH network. The loan proceeds will also be used to finance consultancy services related to the project implementation support, supervision of works and design documentation.</p> <p>[REDACTED]</p>
<b>Investment Plan</b>	[REDACTED]
<b>Financing Plan</b>	[REDACTED]
<b>Key Parties Involved</b>	<ul style="list-style-type: none"> <li>• <i>Borrower</i>: RoS, represented by the MoF;</li> <li>• <i>Implementing party</i>: MEP;</li> <li>• <i>Beneficiaries</i>: Public entities at the central and local level in charge of operation of polluting boiler houses (ministries, public companies, academic institutions, etc.) located in six highly polluted LSGs, namely, Belgrade, Smederevo, Nis, Zajecar, Valjevo and Novi Pazar.</li> </ul>
<b>Conditions to subscription / disbursement</b>	[REDACTED]
<b>Key Covenants</b>	[REDACTED]
<b>Security / Guarantees</b>	Sovereign loan
<b>Other material agreements</b>	Project Agreement, between the Bank and the MEP.
<b>Associated Donor Funded TC and Blended Concessional Finance</b>	<p><b>A. Technical Cooperation (TC)</b></p> <p><i>Pre-signing:</i></p> <ul style="list-style-type: none"> <li>• <b>TC 1. Decommissioning of environmentally harmful boiler rooms in Serbian cities - Scoping study.</b> Funded by ReDEWeB in the amount of EUR 75,000. <i>Completed.</i></li> <li>• <b>TC 2. Comprehensive feasibility study, conceptual designs, and environmental and social impact assessments (FS).</b> The assignment is funded by SIDA. Estimated budget is up to EUR 300,000. <i>Approved.</i></li> <li>• <b>TC 3. Project Preparation Support.</b> The assignment will be funded by an international donor or the SSF. Estimated budget is up to EUR 75,000. <i>Approved.</i></li> </ul> <p><i>Cost sharing:</i></p> <p>MEP will engage a loan-financed qualified independent consultant to support the PIU. In addition, the Borrower is expected to make a parallel contribution in the form of payment of any VAT (currently at 20%), associated with the goods, works and services and post-signing TC assignments.</p>

[REDACTED]



## INVESTMENT PROPOSAL SUMMARY

### 1. STRATEGIC FIT AND KEY ISSUES

#### 1.1 STRATEGIC CONTEXT

The main sources of air pollution in Serbia are generated by the energy sector, the transport sector, waste dump sites and industrial activities. Besides lignite-fuelled thermal power plants and obsolete individual heating systems using firewood or coal, the main sources of pollution in the energy sector are obsolete coal and heavy fuel oil fired (“HFO”) boiler houses located in cities across Serbia. These boiler houses are located mostly in the inner-city centres and represent significant source of emission of NO<sub>x</sub>, SO<sub>2</sub>, particles (PM<sub>2.5</sub>, PM<sub>10</sub>), CO and soot, especially during the winter season when they operate at full capacities. Together with other sources of air pollution and during unfavourable weather conditions, these boiler houses cause poor air quality in Serbian cities during heating seasons which is among the worst in Europe.

Serbia has committed to working towards the 2050 target of a carbon-neutral continent together with the EU by signing the Sofia Declaration on the Green Agenda for the Western Balkans. The Project follows Pillar 1: decarbonization, which includes action for climate, clean energy, and sustainable transport and involves gradually reducing and eventually phasing out the use of fossil fuels for energy production.

The Project will be implemented in six LSGs across Serbia, namely in Belgrade, Smederevo, Nis, Zajecar, Valjevo and Novi Pazar. The investments will support the decommissioning of environmentally harmful boiler houses, investments into sustainable heat sources (including heat pumps and wood biomass) and connections to the DH network. These investments will replace approximately 70,430 MWh of heat currently generated from coal and oil incineration with renewable/waste heat utilization of approximately 59,750 MWh and an additional supply from the existing DH system amounting to approximately 17,940 MWh. This will result in a significant GHG reduction, lowering CO<sub>2</sub> emissions by 18kt per year [REDACTED]. Moreover, it will also substantially reduce other air pollutants from polluting boiler houses, including NO<sub>x</sub>, SO<sub>x</sub>, and particulate matter (“PM”).

The Project will also support the RoS in the implementation of the “Air Protection Program in the Republic of Serbia for the period 2022-2030 Action Plan”, which was adopted by the Government in December 2022. According to the Government, it is estimated that the implementation of measures from the action plan will require over EUR 2 billion of financing over the next several years. This Project represents one of the first multi-city investments that will aim to reduce the air pollution in Serbia.

The Project is in line with the following strategies:

- the Bank’s Strategy for Serbia by supporting investments for “*climate resilience, mitigation and decarbonisation*” and for “*improved quality, sustainability [...] of municipal infrastructure*”;
- the Bank’s MEI Sector Strategy that acknowledges that “*MEI strives to incorporate renewable energy options in its projects*” and includes the use of renewables as a key developing strategic direction for the district heating sector, with focus on quality, resource efficiency, reduced environmental impact;
- the Bank’s GET Approach 2021-2025, which acknowledges *the importance of continuing activities in renewable energy for sustainable infrastructure*;

- the Strategy for the Promotion of Gender Equality by promoting *equal opportunities and women's participation in the engineering industry*; and
- with the Agreement Establishing the Bank.

## 1.2 TRANSITION IMPACT

The table below sets out the TI objectives and details of the Project.

### Primary Quality: Green

Obj. No.	Objective	Details
1.1	<i>The percentage of EBRD use of proceeds that supports a green economy transition and therefore qualifies as GET finance exceeds 50%.</i>	The Project will replace approximately 70,430 MWh of heat currently generated from coal and oil incineration with renewable/waste heat utilization of approximately 59,750 MWh and an additional supply from the existing district heating system amounting to approximately 17,940 MWh. This will result in a significant GHG reduction, lowering CO <sub>2</sub> emissions by 18 ktonnes per year [REDACTED]. It will also substantially reduce other air pollutants from polluting boiler houses, including 27 tonnes of NO <sub>x</sub> , 46 tonnes of SO <sub>x</sub> , 9 tonnes of CO, and 10 tonnes of PM. The percentage of EBRD proceeds qualifying as GET is 90%.
1.2	<i>The project introduces one of the first three of its kind green products or technologies that are innovative at the national or regional level.</i>	The Project will introduce new GET technology in terms of heat utilization (waste-heat power generation infrastructure) in Smederevo. This sub-project is the largest among all sub-projects in terms of the CAPEX amount.

### Secondary Quality: Competitive

Obj. No.	Objective	Details
2.1	<i>The project promotes significant cost efficiency improvements (i.e. minimum 15% reduction of the cost per unit of infrastructure, regardless whether that is charged to users or taxpayers) that will be benchmarked and monitored.</i>	The Project will lead to heat production cost savings in the amount of above EUR 2 million per year (or more than 50% of the total heat production cost).

**Delivery risks:** The main delivery risk relates to failure to implement the Project effectively. This risk is mitigated by the Government's commitment to the Project and improvement of air quality across Serbia in general, as well as the consultancy support which the MEP will receive during the implementation of the Project.

### GENDER SMART TAG: Gender Additional

MEP will serve as a good practice example of the role women can play in male dominated sectors, as they intend to engage in an outreach campaign to attract young girls to science,

technology, engineering, and mathematics (“STEM”), and more specifically to engineering fields relevant for environmental protection. Senior female engineers will act as role models through visits to at least 3 local elementary and high schools annually. MEP will also organize at least one open-door event for female pupils in order to help challenge existing stereotypes about male dominated engineering occupations.

### 1.3 ADDITIONALITY

<b>Identified triggers*</b>
<i>No triggers identified</i>
<b>Additionality sources</b>
<b>Financing Structure</b> <ul style="list-style-type: none"> <li>• The Bank provides long-term financing, which is not readily available in Serbia from local or international commercial banks. The proposed tenor [REDACTED] are above the market average and are necessary to structure the Project given its use of proceeds and implementation requirements.</li> <li>• Public sector: EBRD investment is needed to close the funding gap. At the same time, the EBRD does not crowd out other sources, such as from IFIs, government, commercial banks and/or complements them.</li> </ul>
<b>Standard-setting: helping projects and clients achieve higher standards.</b> <ul style="list-style-type: none"> <li>• The Bank’s experience in financing similar projects is important for the Project’s preparation and execution. The Client will also comply with the Bank’s <b>environmental and social policies</b> which go beyond local requirements.</li> </ul>
<b>Standard setting:</b> <ul style="list-style-type: none"> <li>• Client seeks/makes use of EBRD expertise on <b>best international procurement standards</b>.</li> <li>• The Project includes consultancy services to support the procurement process in line with the Bank’s PP&amp;R.</li> <li>• The Project will help the Client to mitigate carbon transition risks and take climate action, such as moving along a low carbon transition pathway.</li> </ul>
<b>Gender SMART:</b> <p>Client seeks/makes use of EBRD expertise to <b>promote equality of opportunity</b> and promote women in male dominated sectors. Given the high representation of female engineers and other technical staff in the MEP, the Client can serve as a good practice example of the role women can play in male dominated sectors. The MEP agrees to engage in an outreach campaign to attract young girls to STEM, and more specifically to engineering fields relevant for environmental protection. Senior female engineers will act as role models through visits to at least 3 local elementary and high-schools annually. Our Client will also organize at least one 'Girls day' open-door event in order to help challenge existing stereotypes about male dominated engineering occupations.</p>

## 1.4 SOUND BANKING - KEY RISKS

Risks	Probability / Effect	Comments
Sovereign risk / Macro-economic risk	<i>Medium</i>	<p>RoS will service the loan's debt repayment. As such, the fiscal and macroeconomic situation of Serbia has a direct impact on the capacity to service the debt.</p> <p><b>Mitigant:</b> Serbia's rating (BBB-/BB+/Ba2) is underpinned by a track record of macroeconomic stability and a credible policy framework. In October 2024, S&amp;P upgraded Serbia's rating from BB+ to BBB-, with stable outlook, on the back of strong growth, and increased external buffers. The exchange rate vis-a-vis EUR is managed very tightly, supported by the adequate level of international reserves and robust FDI inflows (net FDI inflows of EUR 2.8 billion in the first seven months of 2024). Public debt stood at 50.3 per cent of GDP in July 2024 and is expected to get to 43.8 per cent of GDP (becoming compliant with the 45 per cent threshold set pre-pandemic) in 2028. The foreign currency debt risk is mitigated by the long average maturity of outstanding debt, the high share of fixed interest rate debt, and multilateral and institutional creditors in external debt.</p>
Cost overrun risk	<i>Medium</i> / <i>Medium</i>	<p>The risk of cost increases is linked to recent inflationary pressures. Delays in the Project would increase that risk.</p> <p><b>Mitigant:</b> This risk has been mitigated by the incorporation of technical and financial contingencies, which were developed following the due diligence process, and project implementation support to reduce the risk of delays.</p>
Implementation risk	<i>Medium</i> / <i>High</i>	<p>MEP experience in implementation of EBRD financed projects.</p> <p><b>Mitigant:</b> All contracts under the Project will be procured in accordance with the Bank's PP&amp;R for public sector operations. Any potential risk in project implementation will be additionally mitigated through the appointment of procurement support, while the Project's implementation will be supervised by an independent engineer and supported by a project implementation consultant.</p>
FX risk	High / Medium	<p>RSD has been fairly stable against the EUR at around 1 EUR = 117 EUR during the last 5 years. The exchange rate stability in 2022 underpinned relative macroeconomic stability in 2022 despite the shock of the war in Ukraine. International reserves reached a record high of EUR 22.6bn in end-June 2023 on account of repeated access to external funding, strong remittances and exports.</p>
Performance risk	Medium / Low	<p>The FS confirmed the savings potential for the Project. Project implementation support consultants will monitor and verify the savings as part of the project reporting together with the MEP.</p>

## 2. MEASURING / MONITORING SUCCESS

### Transition Impact Monitoring Indicators

<i>Overall objectives of the project</i>	<i>Monitoring benchmarks</i>	<i>Implementation timing</i>
- Improvement of air quality through reduction of pollutants	- Successful project implementation	[REDACTED]

### Primary Quality: Green

<i>Obj. No.</i>	<i>Monitoring indicator</i>	<i>Details</i>	<i>Baseline</i>	<i>Target</i>	<i>Due date</i>
1.1	<i>CO<sub>2</sub> emissions reduced (tonnes/year)</i>	The Project is expected to reduce 19k tonnes of CO <sub>2</sub> e emissions annually <sup>3</sup> .	0	18,000	[REDACTED]
1.2	<i>Renewable and waste heat energy produced (MWh/year)</i>	The Project includes heat pump, biomass and industrial waste heat utilisation, which will supply approximately 59,750 MWh per year to replace coal and oil products generated heat.	0	59,750	[REDACTED]
1.3	<i>Sulphur oxides (SO<sub>x</sub>) emissions saved</i>	The Project is expected to reduce 46 tonnes of SO <sub>x</sub> emissions annually <sup>4</sup> .	0	46	[REDACTED]
1.4	<i>Nitrogen oxides (NO<sub>x</sub>) emissions saved</i>	The Project is expected to reduce 27 tonnes of NO <sub>x</sub> emissions annually <sup>5</sup> .	0	27	[REDACTED]
1.5	New or updated GET technology or product leading to pollution prevention control introduced	Introduction of new GET technology in terms of heat utilization (waste-heat power generation infrastructure) in Smederevo. This sub-project is the largest among all sub-projects in terms of CAPEX amount.	No	Yes	[REDACTED]

### Secondary Quality: Competitive

<i>Obj. No.</i>	<i>Monitoring indicator</i>	<i>Details</i>	<i>Baseline</i>	<i>Target</i>	<i>Due date</i>
2.1	Operational performance of the client: cost savings	The Project will lead to heat production cost savings in the amount of above EUR 2 million per year (or more than 50% of total cost).	4,887,369	2,887,369	[REDACTED]

**Additional indicators**

<b>Objective</b>	<b>FW level aggregate indicator</b>	<b>Indicator (sub-Project)</b>	<b>Details for Specific Sub-Project</b>	<b>Base line</b>	<b>Target</b>	<b>Due date</b>	<b>TC-related</b>
Gender SMART indicator	Practices of the relevant stakeholder improved (community outreach, advocacy, awareness-raising)	Practices of the relevant stakeholder improved (community outreach, advocacy, awareness-raising)	MEP will engage in at least 3 visits to local elementary and high schools annually and host at least one outreach event annually to attract girls to STEM.	No	Yes	[REDACTED]	No
Advisory & Policy Indicators	Project preparation product approved: Feasibility study approved [Donor TC]	Comprehensive feasibility study, conceptual designs, and environmental and social impact assessments (FS)	-	No	Yes	[REDACTED]	[Donor TC]
Advisory & Policy Indicators	Project preparation product approved [Donor TC]	Decommissioning of environmentally harmful boiler rooms in Serbian cities - Scoping study	-	No	Yes	[REDACTED]	[Donor TC]

**3. KEY PARTIES****3.1 BORROWER**

The Borrower is the RoS, represented by the MoF.

Serbia is the highest-rated and most resilient economy in the Western Balkans. After a moderate growth of 2.6 per cent in 2022, and acceleration to 3.8 per cent in 2023 (according to newly revised data on GDP), GDP growth picked up to 4.3 per cent in H1 2024 driven by services (retail trade, catering and tourism) and construction which recorded double-digit growth. The economic growth is expected to rise nearer its medium-term potential at 3.8 per cent in 2024, and further to 4 per cent in 2025. Serbia remains attractive with net FDI inflow amounting to EUR 2.8 billion in the first seven months of 2024. Fiscal policy has so far been sound, with decreasing deficit from the level of 7.7 per cent of GDP during the pandemic, to 2.1 per cent of GDP in 2023 (EUR 1.5 billion). A surplus of around EUR 220 million was recorded in first eight months of 2024, but Serbia's Fiscal Strategy envisages a deficit of 2.2 per cent of GDP at the end of the year.

Inflation is slowing down (12.4 per cent in 2023 vs 4.9 per cent in the first eight months of 2024) although more slowly than in peer countries. The authorities employed monetary and fiscal policy measures to support the economy in light of continuing high inflation. Monetary policy remains tight with the policy rate slightly reduced from the peak of 6.5 per cent to 5.75 per cent in September 2024. A new set of measures announced for the second half of 2024, on the other hand, are easing the fiscal stance by increasing pensions, minimal wages, and average public sector wages. Despite the expansionary policy, the fiscal deficit is expected to remain at the same level as in 2023 (at 2.2 per cent of GDP), and the International Monetary Fund (“IMF”) assessed the public debt as sustainable.

While remaining above the 45 per cent of GDP threshold, public debt has been falling since 2015 and was at 50 per cent of GDP in H1 2024 (vs. 52.3 per cent at YE2023). It is set to gradually decline to 43.8 per cent of GDP in 2028, conditional on the implementation of feasible fiscal adjustment measures, including those forming part of the Stand-by Arrangement (“SBA”). This is according to the IMF, which in its July 2024 risk assessment classified the likelihood and impact of sovereign debt distress as medium, mitigated by the record high reserves, a steady base of external official and domestic creditors, and manageable fiscal deficits.

Serbia has just received its first investment rating by S&P in October 2024, when they upgraded the long-term sovereign rating to BBB- from BB+, with stable outlook, on the back of strong growth prospects, moderate public debt and increasing foreign reserve assets. Rating by Moody’s is at Ba2 (Positive) upgraded from Stable in September 2024 and by Fitch at BB+ (Positive), upgraded from Stable in August 2024.

*More information is provided in Annex 3.*

### **3.2 IMPLEMENTING ENTITY**

The MEP will be responsible for the overall Project implementation. The MEP shall form a PIU and appoint an adequate number of qualified staff. The PIU will be supported by dedicated teams appointed within the participating LSGs who will be responsible for day to day administration of the contracts for which they are the direct beneficiaries. As both MEP as well as the LSGs participating in the Project have limited procurement and technical experience in managing similar contracts, MEP will engage a loan-financed qualified independent consultant to support the PIU with overall project implementation, including in all procurement matters and supervision of all contracts to be implemented under the Project.

## **4. MARKET CONTEXT**

Heating in the RoS, including both DH and individual heating, primarily relies on fossil fuels and unsustainable burning of wood biomass. The most important fuel for individual household heating in Serbia is wood (34%), while 25% of households use heat from DH systems (48% of urban households), 20% electricity, 10% coal and 9% natural gas. The reliance on the HFO and coal in old heating systems presents serious health and environmental hazards in addition to having a negative impact on the economy and society.

Many public buildings constructed in the mid-20th century and earlier were equipped with HFO or coal boilers due to the economic conditions and fuel availability of that time. In Serbia,



public buildings such as schools, hospitals, administrative buildings, and other governmental facilities still rely on heating systems that include HFO and coal boilers. These systems, while historically common due to their availability and cost-effectiveness at that point, present several challenges and are increasingly targeted for modernization efforts. This situation causes several challenges related to environmental impact and health. Both HFO and coal boilers emit significant amounts of pollutants, including sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and PM. These emissions contribute to poor air quality.

## **5. FINANCIAL / ECONOMIC ANALYSIS**

### **5.1 FINANCIAL PROJECTIONS**

[REDACTED]

### **5.2 ECONOMIC ANALYSIS**

An independent economic analysis was carried out as part of the due diligence process. The Project is expected to achieve a significant reduction in emissions relative to the baseline for each DH system. Emissions reduction is mostly achieved via introducing a renewable heat supply component [REDACTED]

### **5.3 PROJECTED PROFITABILITY FOR THE BANK**

[REDACTED]



## 6. OTHER KEY CONSIDERATIONS

### 6.1 ENVIRONMENT

Categorised B (2019 ESP). The environmental and social due diligence (“ESDD”) was conducted by independent consultant within the of the Feasibility Study and has now been finalised. Key environmental risks are associated with potential soil and ground water contamination and clean-up liabilities due to presence of coal storage facilities and underground and above ground storage tanks (“UST and AST”) for HFO with unknown integrity status, as well as historic ash ponds at the premises of HFO and coal boiler houses. There are also potential asbestos containing materials present in the old boilers’ insulation and the risk of accidental release during decommissioning/demolition. ESDD identified issues with Project entities’ capacity to comply with the Bank’s Performance Requirements (“PRs”), contractor management and biomass supply chain. The replacement works will cause disruptions for users of the Project buildings, including vulnerable groups. Some of the proposed investments may also require a national environmental impact assessment (“EIA”) and are yet to undergo the EIA screening procedure.

The identified gaps and potential impacts will be addressed through the implementation of Environmental and Social Action Plan (“ESAP”). The ESAP contains, inter alia, key actions to be completed as conditions precedent (“CPs”) to disbursement, at the latest. These actions include: (i) Phase II audit to establish the baseline soil and groundwater contamination from coal storage, ash ponds, UST and AST; (ii) an inventory of existing storage tanks to identify actively used and abandoned tanks; (iii) development and approval of decommissioning guidelines for safe removal of obsolete tanks and boilers; and (iv) national EIA screening procedure and EIAs completion if required. The ESAP has been agreed with the Project Implementation Entity and its implementation will be supported by the Project Implementation Unit and closely monitored by the Bank.

### 6.2 INTEGRITY

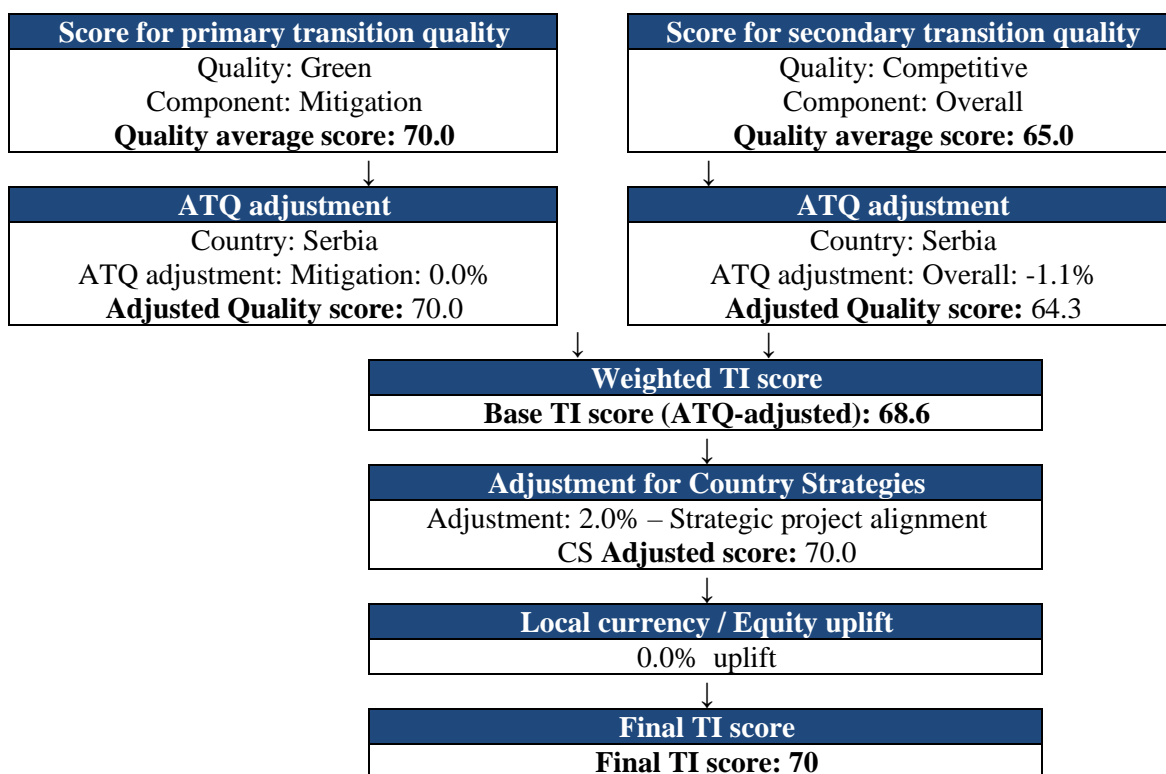
The internal integrity due diligence was undertaken on the MoF and the MEP [REDACTED].

All actions required by applicable EBRD procedures relevant to the prevention of money laundering, terrorist financing and other integrity issues have been taken with respect to the Project, and the project files contain the integrity checklists and other required documentation which have been properly and accurately completed to proceed with the Project.

**ANNEXES TO OPERATION REPORT**

ANNEX 1	Transition Impact Scoring Chart
ANNEX 2	Project Description
ANNEX 3	Macroeconomic and Debt Assessment
ANNEX 4	Green Assessments
ANNEX 5	Project Implementation

## ANNEX 1 - TRANSITION IMPACT SCORING CHART



## ANNEX 2 – PROJECT DESCRIPTION

### Project Description

The Project consists of decommissioning fossil fuel-fired boiler houses in six cities across Serbia: Belgrade, Niš, Valjevo, Zaječar, Novi Pazar, and Smederevo. The Project aims to replace outdated, environmentally harmful boiler houses, which primarily rely on coal, heavy fuel oil, and heating oil, with sustainable and cleaner heating solutions. These boilers significantly contribute to local air pollution, especially during winter, releasing sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO) and particulate matter (PM). The Serbian Government's Air Quality Programme (2022–2030) prioritizes reducing pollution by decommissioning these inefficient systems as part of its long-term air quality strategy.

The Project has proposed alternative heating technologies, including district heating, biomass, heat pumps, industrial waste heat, and other renewable energy sources. Natural gas is proposed only for the subproject in Smederevo and solely for backup purposes, to ensure security of supply in cases where waste heat from the steel factory is temporarily unavailable.

The strategic objectives of the Project are to improve air quality, reduce CO<sub>2</sub> and other pollutant emissions, increase the share of renewable energy in the heating mix, and enhance energy efficiency in Serbian cities. Replacing these boilers with cleaner technologies aims to lower energy consumption, reduce dependence on fossil fuels, and support sustainability goals. Additional benefits include better public health from improved air quality, enhanced biodiversity through reduced acid rain, and local economic gains from job creation during project implementation. The Project also aligns with a circular economy approach by ensuring safe disposal and recycling of materials from decommissioned boiler rooms.

### Renewable Energy Alternatives Considered

Feasibility studies are considering multiple renewable energy options for heating, including:

1. **Heat Pumps:** Utilizing ground, air, or water sources for efficient heating.
2. **Solar Thermal Systems:** Capturing solar energy for heating applications.
3. **Solar Photovoltaic (PV):** Generating electricity from sunlight, which can power heat pumps.
4. **Biomass Boilers:** Using organic materials (e.g., wood chips, pellets) to produce heat.
5. **District Heating Connections:** Where feasible, connecting buildings to centralized heating networks to replace individual polluting boilers. Within the existing district heating systems there is no coal, oil or peat in fuel mix. The existing DH systems in Novi Pazar and Zaječar are based on biomass and in Niš, Valjevo and Belgrade on natural gas.
6. **Building Insulation Improvements:** Enhancing exterior walls, windows, and doors to optimize energy use and complement renewable energy systems.

## Proposed Investment

The feasibility study considered the above options and proposed an investment plan that will prioritize connections to the district heating systems or replacing polluting boilers with heat pumps, biomass solutions, and industrial waste heat (notably in Smederevo). The investment plan was selected based on technical, environmental, and financial criteria, emphasizing district heating benefits like reduced local pollution, increased renewable energy use, and enhanced user comfort. Natural gas was included only as a backup (important for security of supply with no peak role envisaged) in Smederevo with a total capacity of 18MW.

## Technical Requirements and Implementation Considerations

In applying this solution, specific requirements include adapting buildings to low-temperature heating regimes. In cases where existing facilities are unsuitable, thermal rehabilitation may be necessary. The capital expenditure (“CAPEX”) of renewable solutions can be high, impacting simple payback periods.

## Priority Investment Programme (“PIP”)

The total CAPEX for the PIP across 19 projects in 6 cities [REDACTED], with expected reductions in emissions including sulphur dioxide (by 46t/year), nitrogen oxides (by 27t/year), carbon monoxide (by 9t/year) particulate matter (by 10t/year), and CO<sub>2</sub> by 18k tons annually (81% decrease compared to the baseline).

## City-Specific Solutions and CAPEX

- **Belgrade:** District heating connections (10.6 MW) and heat pumps (2.2 MW). [REDACTED]
- **Smederevo:** Utilizing industrial waste heat from the steel plant. [REDACTED]
- **Niš:** Biomass utilization and connection to district heating while creating the potential for future extension and shutting down additional boiler houses. [REDACTED]
- **Zaječar:** New district heating network and boiler room connections. [REDACTED]
- **Valjevo:** District heating connections and heat pumps. [REDACTED]
- **Novi Pazar:** Biomass-based district heating connections for two boiler rooms and creating the potential for future extension and shutting down additional boiler houses. [REDACTED]

## ANNEX 3 – MACROECONOMIC AND DEBT ASSESSMENT

### Macroeconomic developments and policy response

**Economic activity is accelerating.** After moderate growth of 2.6 per cent, in 2022 and acceleration to 3.8 per cent (according to newly revised data on GDP), growth picked up further to 4.3 per cent in the first half of 2024 according to the flash estimate. The highest contribution came from services, predominantly retail trade, catering and tourism, and construction. On the expenditure side growth was driven by domestic demand, namely household consumption and fixed investment, with a negative contribution of net exports due to higher growth in imports of services, particularly tourism and transport, in line with easing inflation and domestic demand recovery. Higher growth in imports, along with a decrease in remittance inflows and state donations in the first seven months reflected in the current account deficit of close to EUR 2 billion, 3 times higher compared to the first seven months of last year. The net FDI inflow remained strong at EUR 2.8 billion in the first seven months of 2024.

**Inflationary pressures are easing, although more slowly than in peer countries.** Average inflation went from 12 per cent in 2022 to 12.4 per cent in 2023 and declined to 4.9 per cent in the first eight months of 2024. The authorities employed monetary and fiscal policy measures to support the economy in light of still high inflation. Monetary policy remains tight with the policy rate slightly reduced from the peak of 6.5 per cent to 5.75 per cent in September 2024. A new set of measures announced for the second half of 2024, on the other hand, are easing the fiscal stance by increasing pensions, minimal wages and average public sector wages. Despite the expansionary policy, the fiscal deficit is to remain at the same level as in 2023 (at 2.2 per cent of GDP), and the IMF assessed the public debt as sustainable. In addition to the fiscal reforms, new draft legislation is in the process of public consultation to allow NBS to put an upper limit on interest rates on housing, consumer, and cash loans, to help boost lending activity which has been weak in 2024.

**Growth is set to pick up in the near term.** Economic growth is to rise nearer its medium-term potential at 3.8 per cent in 2024, and further to 4 per cent in 2025 in line with expected global recovery. However, given the recent revision of GDP due to changed methodology, it is yet unclear how will the growth forecast be affected. The downside risk arises from a speed of growth of the EU as a major trading partner, tight labor markets, geopolitical instability affecting supply chains and adverse weather conditions that may harm agricultural production. On the other hand, successful implementation of reforms in the area of governance of state-owned enterprises and well-planned and executed capital investment may boost growth further. The medium-term outlook remains robust, underpinned by macroeconomic stability, and a record of strong public and foreign investments.

### Debt sustainability

Public debt remained above the maximum level (45 per cent of GDP) set by the fiscal rule prior to the pandemic, despite a significant fall since 2015. In response to the pandemic-induced shock, the government implemented large aid packages in 2020-21 to cushion the impact and support recovery, increasing the budget deficit significantly. Public debt increased from 52.8 per cent of GDP in 2019 to 57.8 per cent of GDP in 2020 before declining to 52.3 per cent of

GDP by the end of 2023. Due to higher forecasted GDP in 2024, the public debt to GDP ratio decreased further to 50 per cent in H1 2024.

Public debt is set to gradually decline to 43.8 per cent of GDP in 2028, conditional on the implementation of feasible fiscal adjustment measures, including those part of the SBA, according to the IMF. The main vulnerability to public debt sustainability stems from the large proportion of foreign currency debt, though this is mitigated by the long average maturity of outstanding debt, the high share of fixed interest rate debt, and multilateral and institutional creditors in external debt. The risk assessment from the July 2024 IMF Staff Report assesses the likelihood and impact of sovereign debt distress as the medium, mitigated by the record high reserves, a steady base of external official and domestic creditors, and manageable fiscal deficits.

Serbia has just received an investment rating (BBB-, with stable outlook) by S&P, upgraded from BB+ in October 2024, due to macrofiscal stability, strong growth prospect and sound external buffers. When it comes to other agencies, the rating is Ba2 (Positive) by Moody's, upgraded from Stable in September 2024 and BB+ (Positive) by Fitch, upgraded from Stable in August 2024.

## ANNEX 4 – GREEN ASSESSMENTS

### SUMMARY

- The Project is a sovereign loan of up to EUR 50 million to finance the decommissioning of fossil fuel-based boiler houses in Serbia, as well as investments in sustainable heat sources (including heat pumps and biomass generation). The proceeds of the loan will also be used to facilitate connection to district heating network and preparation of the project documentation for potential subsequent phases of the Project.
- The Project is determined **aligned with both mitigation and adaptation goals of the Paris Agreement (“PA”)**.
- The Project is attributed 90% **GET**.
- Climate-related financial risks have been assessed [REDACTED]

### PARIS ALIGNMENT ASSESSMENT

#### Alignment with the mitigation goals of Paris Agreement - General screening

The Project is determined as aligned with the mitigation goals of the PA based on the application of the Bank’s PA alignment approach for direct finance.

- The Project’s activity is included in the 'MDBs’ aligned list' under the category *“District heating or cooling systems with negligible lifecycle GHG emissions”* and meets accompanying conditions.
- There are no activities included in the 'non-aligned list'.
- The Project uses renewable energy and waste heat as per the conditions of the relevant joint MDB aligned list category. Applicable additional or specific conditions associated with the ‘aligned’ project/economic activity have been met.

The Project includes use of waste heat-based heat generation via heat pumps and these components are determined as aligned with the mitigation goals of PA as per EBRD PA methodology paragraph A4.11b. For biomass-based generation in Niš, the source criteria from EU Renewable Energy Directive III is expected to be met and will be added as a condition to the loan agreement.

Network infrastructure investments including expansion of the network, are determined as aligned with the mitigation goals of PA as per EBRD PA methodology paragraph A4.11e. The new connections to the DH network have been confirmed by external DD as not resulting in an increase use of coal-, oil- or peat-fired generation, since the relevant district heating plants are based on natural gas and biomass.

The 18MW natural gas-based system proposed within the boundaries of the project (Smederevo sub-project) is solely for back-up purposes, with the main use of proceeds dedicated to waste-heat power generation infrastructure. The back-up generator is included in the design to ensure effective operation of such a generation infrastructure and provide security of supply in cases where waste heat from the steel factory is temporarily unavailable, for example during periods of plant maintenance. Hence, as per paragraph A4.11.c of the Bank’s PA methodology, the back-up system is considered as aligned with the mitigation goals of the PA.

#### Alignment with the adaptation goals of Paris Agreement

The Project is determined as aligned with the adaptation goals of the Paris Agreement as it satisfies all three steps of the assessment. All material physical climate risks have been identified and the Client has committed to address these risks through appropriate adaptation responses, as reflected in legal documentation of the Project.

Step 1: The screening performed under Step 1 indicates that the project faces potentially material physical climate risks: extreme heat; increased water stress; flooding.

Step 2: During the preparation of the investments the client has committed to further assess extreme heat, water stress and flooding risks at each site. Relevant adequate risk mitigation measures (design-



related and/or operational) are going to be defined and integrated in the Project. This has been reflected in the Project's legal documentation.

Step 3: The Project is unlikely to have an impact on the climate resilience of the wider system in which it operates.

## **CLIMATE RELATED FINANCIAL RISK**

[REDACTED]

## **GET ATTRIBUTION**

The Project is attributed 90% GET. This share has been calculated in line with GET Handbook:

- Annex 2: Mitigation, Table 12 Cross-sectoral activities, Activity 12.2 waste heat recovery;
- Annex 2: Mitigation, Table 2 Energy, 2.11 transport/distribution of heating;
- Annex 2: Mitigation, Table 2 Energy, Activity 2.1 renewable energy generation;
- Annex 2: Mitigation, Table 9 Buildings - Activity 9.1 energy efficiency in buildings;
- Annex 3: Environmental Activities, 3: Pollution Prevention and Control, Activity 3.2 Air pollution management.

The expected impacts of the transaction are:

- Reduction in Scope 1 emissions from fossil fuel-based heating systems by over 22 ktCO<sub>2</sub>e/year. It shall be noted that the investment is expected to result in an estimated increase of Scope 2 emissions by 4 ktCO<sub>2</sub>e/year due to increase in connections to district heating and increase in electricity consumption for heat pumps operations. However, even when accounting for the Scope 2 increase, the final balance is highly positive, with a net emissions reduction of approx. 18 ktCO<sub>2</sub>e/year.
- Reduction in air pollutants: SO<sub>2</sub> 46 t/year; NO<sub>x</sub> 27 t/year; PM 10 t/year; CO 9 t/year.
- The Project will also result in use of waste heat from steel factory in Smederevo, and the deployment of district heating level heat pumps.
- The Project includes the installation of 0.8MW biomass boilers capacity, with an estimated annual use of approx. 300 t/year of biomass. The Client is required to procure biomass from certified sources (FSC, PEFC or equivalent). Given the limited volume of biomass use, Scope 3 emissions related to its production and transport are not material.

The GET share has been calculated by excluding the CAPEX dedicated to natural gas back-up systems, in line with the GET guidance, Table 2 Energy, point 2.2.

## **GREEN PROJECT MONITORING PLAN**

[REDACTED]

## ANNEX 5 – PROJECT IMPLEMENTATION

### Procurement classification – *Public sovereign*

[REDACTED]

The executing agency for the Project will be a dedicated PIU, established within MEP, which will be in charge of procurement, contract administration, disbursements and reporting to the Project financiers. The PIU was not appointed at the time of review of their Procurement Capacity and therefore the MEP and PIU procurement capacity could not be assessed. However, it was noted that generally the MEP has limited procurement and technical experience in managing similar contracts. To mitigate such risk, the MEP will engage a qualified independent consultant to support the PIU develop the technical specifications and requirements and assist the PIUs in all procurement matters concerning the implementation of the Project. Additionally, the MEP will engage a works supervision consultant to supervise all the works contracts to be implemented under the Project.

[REDACTED]

The scope of the contracts to be covered by the Project are not technically challenging. There are four contracts to be financed under the Project namely: a) the PIU support and works supervision consultant and b) three works contract. There is limited experience in preparing and implementing these kinds of projects in the RoS. To mitigate such risks, the PIU support consultant will be tasked to do a market sounding and promote the Project both domestically and internationally.

#### **Procurement arrangements:**

The Project is classified as a public sector operation for procurement purposes.

All contracts financed from the EBRD loan proceeds, as presented in the indicative Procurement Plan, will be procured through open competitive procedures in accordance with Article 3, Section III of EBRD PPR and relevant EBRD Standard Procurement Documents.

The current procurement strategy envisage that all works contracts to be financed under the Project will be procured through Open Multiple Stages tendering procedure with prequalification and will be based on FIDIC Yellow Book General Conditions of Contracts.

The procurement of goods and related services will be procured through ‘Open’ Single Stage tendering procedure and EBRD standard tender documents and form of contract for goods and related services.

The consultancy services to be financed under the Project will be procured through Competitive Selection, single stage two envelopes, and will be based EBRD Standard Request for Proposals and forms of contracts.

All contracts will be subject to the Bank’s prior review.

[REDACTED]

PUBLIC

PUBLIC