

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

Approved by the Board of Directors on 13 December 2023<sup>1</sup>

**SERBIA**

**EPS VLASINSKE HPP REHABILITATION**

*[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

AERS	Energy Agency of the Republic of Serbia
CDP	Cassa Depositi e Prestiti
CFADS	Cash Flows Available for Debt Service
CFF	Cash Flow from Financing
CFI	Cash Flow from Investments
CFO	Cash Flow from Operations
CO <sub>2</sub> eq	Carbon dioxide equivalent
CP	Conditions Precedent
CPI	Consumer Prices Index
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
ECEPP	EBRD Client E-Procurement Portal
EIA	Environmental Impact Assessment
EPS	JCS Elektroprivreda Srbije
ESAP	Environmental and Social Action Plan
ESDD	Environmental and Social Due Diligence
EURIBOR	Euro Interbank Offered Rate
GW	Gigawatts
GWh	Gigawatt hours
HPP	Hydro Power Plant
NECP	National Energy and Climate Plan
RSD	Serbian Dinar
TC	Technical Cooperation
TCFD	Task Force on Climate Related Financial Disclosures
TPP	Thermal Power Plant
WBIF	Western Balkans Investment Facility
WPP	Wind Power Plant

## CURRENCY EQUIVALENTS

1 Euro = 117.2 Serbian Dinar (October 2023)

## WEIGHTS AND MEASURES

1 kilowatt (kW)	=	1,000 watts (10 <sup>3</sup> W)
1 Megawatt (MW)	=	1,000 kilowatts (10 <sup>3</sup> kW)
1 Gigawatt (GW)	=	1 million kilowatts (10 <sup>6</sup> kW)
1 kilowatt-hour (kWh)	=	1,000 watt-hours (10 <sup>3</sup> Wh)
1 Megawatt-hour (MWh)	=	1,000 kilowatt-hours (10 <sup>3</sup> kWh)
1 Gigawatt-hour (GWh)	=	1 million kilowatt-hours (10 <sup>6</sup> kWh)

## PRESIDENT'S RECOMMENDATION

This recommendation and the attached Report concerning an operation in favour of JSC Elektroprivreda Srbije (the “Company”), the wholly state owned electricity utility of Serbia, active in the production and supply of electricity, are submitted for consideration by the Board of Directors.

The facility will consist of a sovereign-guaranteed loan to the Company in the amount of up to EUR 67 million. The loan will be guaranteed by the Republic of Serbia.

The operation will enable the Company to finance the reconstruction of the Vlasinske hydro power plant cascade (the “**Project**”), which will increase the capacity of the existing hydro power plant, help increase the stability of the Serbian electrical system, and allow the energy grid to balance increasing volumes of energy from intermittent renewable energy sources.

The Project targets the Green transition quality (*GET Direct Track*) and aims to boost the portion of renewable energy sources in Serbia’s power generation by enhancing the performance and extending the useful life of the Vlasinske HPP cascade. After project completion, the capacity of the HPPs will increase from 129 MW to 137 MW. It will also improve the overall stability of the system, especially in the light of anticipated increased penetration of intermittent renewables in the country’s generation mix.

TC support for the project preparation has been provided by the DRIVE fund covering technical and environmental due diligence (EUR 114 thousand). The Project will benefit from a EUR 15.4 million investment grant approved by the Western Balkans Investment Framework (“WBIF”) in December 2022.

The project is aligned with the Bank’s Strategy for the Serbia, the Energy Sector Strategy and the Green Economy Transition approach.

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

**Odile Renaud-Basso**

## BOARD DECISION SHEET

SERBIA – VLASINSKE HPP REHABILITATION - DTM 54355	
<b>Transaction / Board Decision</b>	Board approval <sup>2</sup> is sought for a sovereign guaranteed loan of up to EUR 67 million in favour of JSC Elektroprivreda Srbije (“EPS”, the “Company”, or the “Borrower”), the wholly state-owned electricity utility in Serbia, to finance the rehabilitation of the Vlasinske hydro power plant cascade (“HPP”), as well as works supervision (the “ <b>Project</b> ”). Procurement will be carried out in accordance with the Bank’s PP&R.
<b>Client</b>	<b>Borrower:</b> EPS, an existing client of the Bank, is a power utility fully owned by the Republic of Serbia with operations consisting of electricity generation, supply and trading. In 1H 2023, EPS reported total assets of EUR 8.9bn, revenues of EUR 2.3bn, and EBITDA of EUR 827m (38% EBITDA margin). <b>Guarantor:</b> Republic of Serbia (the “ <b>Guarantor</b> ”) through the Ministry of Finance.
<b>Main Elements of the Proposal</b>	<b>Transition impact</b> Green ( <i>GET Direct Track</i> ) - the Project will increase installed renewable energy capacity, resulting in higher efficiency and greater stability of the electricity system. It will extend the life of an existing operational HPP cascade and ensure that it operates at optimal levels, reducing the likelihood of equipment failures. The additional CO2 emission reductions are estimated at 11,250 tons per annum, based on an expected average increase of 16,600 MWh/year in renewable energy generated, stemming from the anticipated 8 MW increase in installed capacity and the higher efficiency. <b>Additionality</b> is derived from (i) providing financing with a long tenor, not available in the market from commercial sources; ii) securing of WBIF investment grant thanks to Bank’s support. <b>Sound banking:</b> The Project benefits from a sovereign guarantee.
<b>Key Risks</b>	Delays in project implementation risk is mitigated by i) EPS engaging a highly experienced consultant to assist with procurement and ii) a supervisor to be engaged to oversee implementation. The risk of limited debt service capacity of the Company is mitigated through the sovereign guarantee.
<b>Strategic Fit Summary</b>	The Project is aligned with the Bank’s Strategy for the Serbia, which states that <i>“the Bank will aim to continue to play a key role in promoting energy efficiency and renewable energy, while assisting with replacing the aging electricity generation capacity and bringing power generation into compliance with the EU environmental standards.”</i> It is also consistent with the Energy Sector Strategy and the Green Economy Transition approach.

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

## ADDITIONAL SUMMARY TERMS FACTSHEET

<b>EBRD Transaction</b>	<p>Sovereign guaranteed loan of up to EUR 67 million to finance the reconstruction of the Vlasinske HPP cascade consisting of four dams and supervision of works (the “<b>Project</b>”). Total Project budget of EUR 82.4 million will be financed by Bank loan and Western Balkans Investment Framework (“WBIF”) investment grant in the amount of EUR 15.4 million (approved in December 2022).</p> <p>The rehabilitation will i) help ensure the reliable and safe operations; ii) increase the cascade’s installed capacity from 129 MW to 137 MW (via increased efficiency); and iii) reduce malfunctioning which can cause the whole cascade to produce at significantly reduced rate (60-80 MW). Post implementation the HPP cascade will increase its yield by 6%, generating 311.6 GWh/year, resulting in 16.6 GWh/year of increased green production. The Project is a strategic priority for Serbia as well as a flagship project under the Economic and Investment Plan for the Western Balkans, adopted by the European Commission in October 2020. Increased system stability is critical to support absorption of intermittent renewable, including recently announced three-year plan for RES auctions for 1.3 GW of wind and solar.</p>
<b>Existing Exposure</b>	<p>Existing exposure to EPS: EUR 304.7 million. [REDACTED].</p> <p>Existing exposure to the Republic of Serbia:</p> <p>As of 30 September 2023, the Bank’s sovereign portfolio amounts to EUR 1,268 million [REDACTED].</p>
<b>Maturity / Exit / Repayment</b>	Tenor of 15 years [REDACTED].
<b>Potential AMI eligible financing</b>	n/a
<b>Use of Proceeds - Description</b>	<p>Proceeds of the loan will finance the rehabilitation of the Vlasinske HPP cascade through the procurement of new generation units, accompanying auxiliary electromechanical systems, hydro mechanical and control equipment, upgrade of IT systems, and supervision consultant services. Direct negotiations will be required for certain equipment and software. [REDACTED].</p>
<b>Investment Plan</b>	[REDACTED]
<b>Financing Plan</b>	[REDACTED]
<b>Key Parties Involved</b>	<ul style="list-style-type: none"> <li>• EPS</li> <li>• Ministry of Finance</li> <li>• Ministry of Mining and Energy (“MoME”)</li> </ul>
<b>Conditions to disbursement</b>	<ul style="list-style-type: none"> <li>• [REDACTED]</li> </ul>
<b>Key Covenants</b>	<ul style="list-style-type: none"> <li>• [REDACTED]</li> </ul>
<b>Security / Guarantees</b>	Sovereign guaranteed – Republic of Serbia (Fitch: BB+/S&P: BB+/Moody’s Ba2).

<b>Other material agreements</b>	Guarantee Agreement with the Republic of Serbia.
<b>Associated Donor Funded TC and Blended Concessional Finance</b>	<p>TC assignments were not flagged in the NTN for the Project since due diligence gaps were identified post NTN.</p> <p><b>Technical Cooperation (TC)</b>  <i>Pre Signing</i></p> <ul style="list-style-type: none"> <li>• <b>TC1: Technical due diligence</b> - EUR 83,250 provided by Austria DRIVE Programme Account. The main objective of the assignment was to review technical specifications, suggest procurement strategy and review other technical aspects of the Project. The due diligence has been completed in July 2023. The consultants will remain engaged until tender documents are finalized.</li> <li>• <b>TC2: Environmental and Social Assessment</b> - EUR 31,100 provided by Austria DRIVE Programme Account. The main objective of the assignment was to review environmental and social aspect of the Project and propose Environmental and Social Action Plan, Non-Technical Summary and Stakeholder Engagement Plan for the Project. Due diligence and deliverables have been completed.</li> </ul> <p><b>Client contribution:</b> the Borrower contributed in-kind by providing transport for the consultants for site visits, accommodation cover when required and translation services. They will also make a parallel contribution by financing PIU Support consultants.</p>

[REDACTED]

## INVESTMENT PROPOSAL SUMMARY

### 1. STRATEGIC FIT AND KEY ISSUES

#### 1.1 STRATEGIC CONTEXT

The proposed Project is another step in Serbia's power sector decarbonisation and modernisation plans which will help rehabilitate outdated hydropower capacities and ensure reliable operations, while at the same time, strengthening its balancing capacities to help the grid absorb the increasing number of intermittent renewable capacity that is underway. The Project is complementary to EPS Liquidity loan of EUR 300 million signed in March 2023. Both loans, including a major TC work underway, are result of successful collaboration between the Bank and the key stakeholders on Serbia's side, and will play an important role in supporting the decarbonisation of Serbia's energy sector through a holistic approach at the national and corporate levels in line with Serbia's commitments under the Paris Agreement.

The liquidity loan includes a series of important conditionalities which will help Serbia to move towards its first major decarbonisation steps and improve its corporate governance of EPS. As a fulfilment of these covenants, the Government of Serbia has, for the first time, committed to a coal phase-out by 2050, in line with EU countries' commitments. Another major milestone was the launch of Serbia's first ever contract for difference ("CfD") auctions, which took place in July 2023 and were held successfully closed in September 2023, with 422 MW awarded for new wind and solar capacity. More importantly, auctions unlocked further investments by private investors in renewables in Serbia and another CfD auction is planned to be launched during the [REDACTED] 2024 (see Annex 7 for more details). The Bank has also here played a key role in on the policy dialogue side, where it has been supporting Serbia with the renewable energy law, the auction design and launch, via a TC which commenced back in 2020. In addition, Serbia adopted a three-year plan for CfD auctions aiming at awarding CfD support for at least 1,300 MW capacity of wind and solar, thus providing a strong signal to the stakeholders about its greening commitments. As a separate initiative, Serbia has recently launched a public call for selection of a strategic partner who will install a 2 GW of wind and solar plants, and subsequently hand them over to EPS. With expected increase of scattered, intermittent electricity sources on the grid, the balancing reserves will become increasingly more important.

At the company level, EPS has committed to: (a) develop credible Paris-aligned decarbonisation and action plan, aligned with NECP, with no new coal provision [REDACTED], (b) enhance its Corporate Climate Governance by implementing recommendations from the Task Force on Climate-related Financial Disclosures ("TCFD") [REDACTED], including integrating climate change considerations into corporate practices. The procurement process for consultants is underway.

Proposed capital investment Project will be implemented within the context of the Bank's multi-layer involvement in the energy sector transition in Serbia, and will be part of a broader holistic engagement, covering policy development, institutional capacity building, and support for green and resilient investments [REDACTED]. The Bank's leadership in this space has been recognised and endorsed by other major IFIs,



including the German KfW and Italian CDP, with whom the Bank has been working hand in hand to mobilise and facilitate their own follow-up investments to EPS. As a result, in June 2023, KfW signed EUR 100 million liquidity loan with EPS, on identical terms as the Bank's EPS Liquidity loan [REDACTED].

The Government also introduced a number of positive corporate governance changes at EPS, including transforming the company from a public enterprise to a joint stock company, as well as appointing a new Supervisory board including several foreign independent directors, including the Chairman of the Board (elaborated in Annex 7).

The Project is aligned with the Bank's Strategy for Serbia, supporting green economy by fostering energy efficiency, enhancing renewable energy, and promoting sustainable practices, as well as promoting inclusive and gender-equal growth. It is also consistent with the Energy Sector Strategy and draft Energy Sector Strategy 2024-28, the Green Economy Transition approach and with the Agreement Establishing the Bank.

## 1.2 TRANSITION IMPACT

### Primary Quality: Green – GET Direct Track

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 60%</i>	The share of GET-compliant EBRD proceeds is 100%. The investment aims to boost the portion of renewable energy sources ("RES") in Serbia's power generation by enhancing the performance of the Vlasinske HPP. This rehabilitation project is estimated to improve the installed capacity of the HPP, resulting in higher efficiency and greater stability in the electricity system. The rehabilitation of the plant will also ensure that it operates at optimal levels, reducing the likelihood of equipment failures and the release of harmful substances into the environment. The Project is expected to increase energy output by approximately 16,600 MWh/annum from renewable energy sources and to bring about 11,250 tCO <sub>2</sub> /annum reductions.

## 1.3 ADDITIONALITY

Identified triggers	Description
A subsequent/consecutive transaction (issuance) with the same client/group either with the same use of proceeds or in the same destination country ( <b>repeat transaction</b> ).	This is a new transaction with the same client (EPS) in the same country (Serbia), therefore a trigger is identified. Through proposed Project, the Bank will be supporting EPS' investment in stability and reliability of its green energy sources, thus creating a solid base for introduction of new intermittent RES into the system.
Additionality sources	Evidence of additionality sources
Financing structure	

<ul style="list-style-type: none"> <li>– EBRD offers financing that is not available in the market from commercial sources on reasonable <b>terms and conditions</b> [REDACTED]. Such financing is necessary to structure the project.</li> <li>– EBRD offers a <b>tenor</b>, which is longer than available to the client in the market on reasonable terms and conditions.</li> <li>– EBRD offers a large volume instrument that fills a market funding gap and is required to structure the project.</li> </ul>	<p>Proposed 15 year tenor [REDACTED] and loan size of EUR 67 million cannot be obtained from local commercial banks due to regulatory constraints. [REDACTED].</p>
<p><b>Standard-setting - helping projects and clients achieve higher standards</b></p> <ul style="list-style-type: none"> <li>– Client seeks/makes use of EBRD expertise on higher environmental standards, above ‘business as usual’ (e.g. adoption of emissions standards, climate-related ISO standards etc.)</li> <li>– Client seeks/makes use of EBRD expertise on best international procurement standards.</li> </ul>	<p>The ESAP for the proposed Project will ensure compliance and implementation of best practice.</p> <p>EPS will benefit from Bank’s expertise and guidance with regards to implementing Bank’s PP&amp;R and thereby achieve the optimal result with regards to procurement.</p>

#### 1.4 SOUND BANKING - KEY RISKS

Risks	Probability/ Effect	Comments
<b>Project implementation risk</b>	Medium/ Medium	<p>The main risk is related to implementation of the Project within the agreed timeline and budget. Installation and integration of all equipment needs to be closely monitored.</p> <p><u>Mitigation:</u> EPS has engaged an experienced PIU consultants with sector and technical expertise which will assist in drafting of the technical requirements and support the tendering process. In addition, EPS will be carrying out advance procurement before the loan is signed to ensure swift implementation.</p> <p>Works supervisor to be appointed will provide assurance that works are carried out in a timely manner</p>

		and within budget, including works inspections with detailed technical records kept.
<b>Company's Creditworthiness</b>	Medium/ Low	<p>EPS performance has suffered in 2021/2022 which resulted in higher reliance on electricity/coal imports at very high prices.</p> <p><u>Mitigation:</u> EPS's financial performance substantially recovered in 2023 [REDACTED].</p> <p>While the repayment of the proposed loan will rely on Company's performance, ultimately the risk is mitigated by the sovereign guarantee which ensures the debt will be serviced.</p>
<b>Guarantor's Creditworthiness</b>	Low/ High	<p>Serbia is rated at BB+ (Stable) by S&amp;P, Ba2 (Stable) by Moody's and BB+ (Stable) by Fitch. Serbia's rating is underpinned by a track record of macroeconomic stability and credible policy framework.</p> <p>In line with the adverse global macroeconomic environment, the country's GDP growth slowed to 2.3% YoY in 2022, decelerating sharply from the 7.4% growth in 2021, and continued at a muted pace of 1.2 % in the first half of 2023.</p> <p>Economic growth is expected to slow down further to 1.8% in 2023 before returning closer to its medium-term potential at 3.5% in 2024 ([REDACTED] EBRD REP, September 2023). The medium-term outlook remains robust, underpinned by macroeconomic stability, a record of strong public and foreign investments and a commitment to reform anchored by the EU approximation process.</p> <p><u>Sovereign risk is mitigated by:</u> (i) Serbia's public debt is expected by the IMF to fall below 50% of GDP by 2026 thanks to expected medium term fiscal consolidation and growth recovery, and conditional on the implementation of feasible fiscal adjustment measures, including those part of the Stand-By Arrangement; (ii) the majority (85%) of the public debt is fixed rate, average maturity of outstanding debt is long and share of official and institutional creditors in the external debt is high; (iii) availability of external financing, including through successful Eurobond issuances in January 2023 (a 5-year and a 10-year Eurobond, both hedged against the euro and heavily oversubscribed), engagement with the IMF through a two-year Stand By Arrangement and bilateral financing.</p>

## 2. MEASURING / MONITORING SUCCESS

The indicators reported in the below Integrated Result Matrix have been extracted from the Grant Application Form (section "27. Expected Results") for the purpose of compliance with reporting requirements.

**TI indicator(s), primary Quality: Green**

Obj. No.	Monitoring indicator	Details	Baseline	Target	Due date
1.1	Renewable energy capacity installed (MW)	The reconstruction of HPP Vlasinske will increase the installed capacity of the cascade Why 8 MW due to increased efficiency.	[REDACTED]	[REDACTED]	[REDACTED]
1.2	CO2e emissions reduced (tonnes/year)	Additional CO2 emission reductions are estimated at 11,250 tons per annum, stemming from increase in renewable energy generated.	0	11250	[REDACTED]
1.3	Renewable energy - electricity produced (MWh/year)	Increase in efficiency will lead to increase in renewable electricity generated. The average annual production is expected to increase from 295 GWh to 311.6 GWh.	[REDACTED]	[REDACTED]	[REDACTED]

**Additional Indicators**

Indicator type	Monitoring indicator	Details	Baseline	Target	Due date
Advisory & Policy Indicators	Generic Indicator	Direct employment: Construction phase - [REDACTED] // Operations and maintenance - [REDACTED]	No	Yes	[REDACTED]
Advisory & Policy Indicators	Generic Indicator	No. of women in decision-making positions is expected to increase [REDACTED]	No	Yes	[REDACTED]
Advisory & Policy Indicators	Generic Indicator	No. of households, benefitting from electricity production, is expected to increase [REDACTED] (based on the criteria for average energy consumption of a household of approximately 300 KWh per month)	No	Yes	[REDACTED]

Advisory & Policy Indicators	New or updated GET technology or product leading to energy efficiency introduced	Average capacity availability of HPP is expected to increase due to higher reliability [REDACTED] (used for balancing)	No	Yes	[REDACTED]
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### 3. KEY PARTIES

#### 3.1 BORROWER

EPS is fully state-owned incumbent power utility in Serbia. Its operations consist of the generation and supply of electricity. The Company usually provides around 95% of the entire domestic production. Annual production in 2022 was about 21,413 GWh from the TPPs (installed capacity of 4,079 MW), 753 GWh from the CHPPs (installed capacity 297 MW), and 8,964 GWh from the HPPs (installed capacity 3,015 MW). EPS employs c. 24 thousand people and is the largest employer in the country.

In April 2023, EPS' legal form changed from a public company to a joint stock company, with all the shares remaining in state ownership, as part of the Government reform efforts to professionalise the management and further reform the Company in line with best practice. In June 2023, a new Supervisory Board was appointed including sector experts from Norway, which, in turn, is expected to appoint a new CEO. With good financial performance in 2022, and access to sufficient liquidity, as well as additional tariff increases over the past 9 months, it is expected that the Company's will continue to perform in line with 1H 2023, subject to operations remaining stable.

Serbia and its state-owned generation company, EPS, face major challenges transitioning away from their existing reliance on legacy lignite-fired infrastructure for power generation. Over the past years, the share of renewable energy in gross final electricity consumption has remained below 30% [REDACTED].

In March 2023, the Bank signed EUR 300m liquidity loan with EPS, the proceeds of which are being used towards covering the non-fossil fuel related operating costs of the Borrower [REDACTED]. Shortly after in June 2023 EPS signed EUR 100m with KfW on virtually identical conditions [REDACTED]. As part of the financing package, the Borrower and the Guarantor have committed to implement a series of reforms and actions towards i) decarbonisation of the Company and the sector, ii) corporate governance improvements and iii) gender equality and economic inclusion. Please refer to **Annex 7** for updates on these points.

#### Financial highlights

<i>EUR MM</i>	<b>2020</b>	<b>2021</b>	<b>2022</b>	[REDACTED]	[REDACTED]
	<i>Audit</i>	<i>Audit</i>	<i>Audit</i>		
Revenue	2,156	2,720	3,104		
EBITDA	597	202	(299)		
<i>EBITDA margin</i>	<i>27.7 %</i>	<i>7.4 %</i>	<i>(9.6)%</i>		
Financial debt	1,072	1,253	1,415		

Cash and cash equivalents	173	115	120
Equity	3,062	3,069	3,073
Cash flow from operating activities	400	335	6
Cash flow from investment activities	(431)	(420)	(482)
Cash flow from financial activities	28	26	483
Net cash flow	(3)	(59)	7
<b>Key Ratios</b>			
Net Debt/EBITDA (LTM for 1H 2023)	1.51x	5.64x	(4.33x)
Gross Debt/EBITDA (LTM for 1H 2023)	1.80x	6.20x	(4.74x)
Current ratio	1.29x	0.84x	0.55x
Debt-Equity	0.21x	0.24x	0.31x

Year 2022 was one of the most challenging periods for EPS when the Company was adversely affected by several major forces, namely, a) poor hydrology (hydro generation dropped by 23% y-o-y vs 2021), b) operational failures at several thermal plants and mines which led to decrease in electricity and coal production (followed by a sharp rise in rather expensive imports during the times of the crisis), and c) market prices reaching record levels (SEEPEx reached a max of 888 EUR / MWh) at which EPS had to import electricity. EPS ended 2022 with a negative EBITDA of c. EUR 299 million due to a drastic surge in its costs due to high prices of electricity imports, and a barely positive operational cash flow, however a solid cash buffer of EUR 120 million remained in place. As the liquidity needs were rapidly growing, the Borrower [REDACTED] turned to the IFIs, namely EBRD, which approved EUR 300 million liquidity sovereign loan in two tranches, and KfW, which approved EUR 100 million sovereign loan (signed in June 2023). [REDACTED].

Towards the end of 2022, operations normalized with new experienced management taking over and putting appropriate measures in place, while at the same time the market volatility decreased. [REDACTED]. *Detailed historic financial accounts are presented in Annex 2.*

### 3.2 GUARANTOR

The Guarantor is the Republic of Serbia, represented by MoF. In line with the adverse global macroeconomic environment, GDP growth slowed to 2.3 per cent year-on-year in 2022 and continued at a muted pace of 0.7 per cent in the first quarter of 2023 as household consumption growth and government consumption gradually slowed down, ultimately contracting in the first quarter of 2023 as inflation remained firmly in double-digits. A strong decline in government consumption since mid-2022, coupled with muted investment growth, contributed to a sharp decline in construction activity. The current account deficit widened from 4.2 per cent of GDP in 2021 to 6.9 per cent of GDP in 2022, largely on the back of an increased energy import bill and weakening external demand. FDI inflow reached a record high of EUR 4.4 billion in nominal terms in 2022 (mainly from China and the EU).

The main challenge to Serbia's debt sustainability relate to absence of further structural fiscal adjustment and unfavourable internal and external developments due to different shocks. The country's debt is however considered sustainable and expected to remain

on a downward path in the medium-term, in case the expected fiscal consolidation and growth recovery materialises. Continuing engagement with the IMF through a two-year standby arrangement supports macro-financial stability and upholds confidence that important policy measures will be pursued. Serbia is rated at BB+ (Stable) by S&P, Ba2 (Stable) by Moody's and BB+ (Stable) by Fitch.

#### 4. MARKET CONTEXT

Electricity production in Serbia in 2022 amounted to 33.11 TWh, while the gross consumption was 34.79 TWh and the final consumers' electricity consumption was at 30.24 TWh. The remaining part was used for electricity losses recovery in transmission and distribution, and for the power plants operations. The final consumers' consumption decreased by 0.3 TWh YoY. Due to the last year's disruptions with TPPs and well as the electricity price surge driven by geopolitical events in Europe, the import of electricity dramatically increased in the last quarter of 2021 and were the highest in the first quarter of 2022. [REDACTED].

Serbia has made considerable progress towards meeting its Energy Community Treaty obligations and in liberalising its energy sector. Generation, transmission and distribution are fully separated. Distribution has been split off from EPS at end 2020 and is now owned and operated by the state-owned Elektro distribucija Srbije (EBRD Borrower under OpID 51299). MoME is assigned primary responsibility over the energy sector in the country with the Minister responsible for the energy strategy and overseeing all public investments in the energy sector.

The Energy Agency of the Republic of Serbia ("AERS") is the single authority regulating the energy sector of Serbia, as required by the Third Energy Package. The regulator is responsible for issuing the relevant licences, setting tariff methodologies, proposing tariffs for monopoly activities and monitoring the operation of the energy market.

Given its high legacy dependence on coal and lack of substitute energy alternatives, Serbia has been slow to adopt a decarbonisation strategy or to set a fixed exit date for coal. Renewable energy remains undeveloped, with only 430 MW of installed wind farm capacity and c. 20 MW of PV capacity. However, the NECP and Energy Development Strategy are under preparation and expected to be finalised at the end of 2023. As per the latest announcements, Serbia will aim to reduce greenhouse gas emissions compared to 1991 by 34% by 2030, or by 52% by 2040.

A major milestone towards decarbonisation is the launch of renewable energy auction which took place in July 2023. MoME announced that premium subsidies in the form of CfDs will be awarded for 400 MW of wind and 50 MW of solar capacity in the auction which. In addition, the MoME announced that another 1GW of renewables will be auctioned under the same scheme over the next 3Y. Moreover, in May 2023, the MoME publicly committed to coal phase-out by 2050, in line with the EU members.



## 5. FINANCIAL ANALYSIS

### 5.1 FINANCIAL PROJECTIONS

[REDACTED]

### 5.2 SENSITIVITY ANALYSIS

[REDACTED]

### 5.3 PROJECTED PROFITABILITY FOR THE BANK

[REDACTED]

## 6. OTHER KEY CONSIDERATIONS

### 6.1 ENVIRONMENT

The Project is Categorised B in accordance with EBRD's 2019 E&S Policy. The risks associated with the rehabilitation of existing hydropower assets has been assessed by way of independent E&S due diligence which has confirmed that impacts associated with the project can be readily identified and mitigated. Vlasinske hydropower scheme is an existing cascade of four hydropower plants located in the southern part of Serbia. Vlasinske hydropower scheme was initially constructed in two stages between 1946 and 1972. Vlasinske hydropower scheme is fed from Vlasina Lake, the highest (1211 m) and largest artificial lake in Serbia and the lake is now a protected area. The cascade consists of four hydropower plants called Vrla 1 to 4, with a total capacity of 129 MW. The Vlasinske hydropower cascade needs rehabilitation, in particular, electromechanical equipment are in poor condition and inefficient as the 129 MW Vlasinske cascade frequently only operates at an effective capacity of 60-80 MW.

The Project includes the replacement of generator units at Vrla 1-4 HPPs and associated equipment. No works are planned on Vlasina dam or at Lisina Pumping Station. The only work that will be undertaken within the Vlasina Lake protected area is the replacement of electromechanical control equipment within the intake structure on Vlasina lake shore and ESDD has confirmed this will not impact on the conservation objectives of the protected area and is within the existing footprint of the assets. The reconstruction will allow the reliable and safe operation of Vlasinske HPPs for the next 40 years of operation, as well as increasing the installed capacity of the site from 129 MW to 137 MW via increased efficiency. More significantly, an expected indirect impact of the rehabilitation is to provide major benefits for the development of renewable energy in the country and an increase the stability of the electricity system, and improve EPS's ability to balance the grid, and allow for the increased penetration of intermittent renewables in the country's generation mix.

The works schedule is such that in each period of rehabilitation half of the production units will be available, while the other half will be under rehabilitation. Considering that, the regimes of exploitation of the Vlasina reservoir as well as the regimes of the rivers that flow into the intermediate reservoirs will remain within the designed and approved limits during the rehabilitation period. The Project will then be implemented by a Project Implementation Unit ("PIU") formed of EPS staff and based within EPS premises. The primary risks and potential impacts associated with project



implementation are related to the construction phase and include increase of traffic and usage of local infrastructure to allow access to the hydropower plants and an associated, temporary, increase of noise, exhaust emissions and occasional obstruction of passage during construction. The operation phase is expected to be associated with the same current physical impacts as the rehabilitation: fluctuations of the water level in Vlasina Lake and variations of the flow in downstream rivers and canals, depending on operation.

An E&S Action Plan has been developed and agreed with EPS, the requirements of which will also be imposed on the PIU. EPS has adopted the ESAP which includes project specific mitigation measures such as developing contractor E&S management plans to mitigate the full range of issues associated with rehabilitation works. In addition, operational phase measures for good E&S practice will be reviewed and updated, including a review of the operating regime and impacts on downstream users. Lastly, EPS will notify the applicable authorities on both sides of the international-border that the works will be undertaken and that no transboundary issues are anticipated. A Non-Technical Summary and Stakeholder Engagement Plan have been developed and will be disclosed by EPS.

## **6.2 INTEGRITY**

In conjunction with OCCO, integrity due diligence was undertaken on EPS, its senior management, and board members. [REDACTED] EPS is an existing Borrower of the Bank via several projects. [REDACTED].

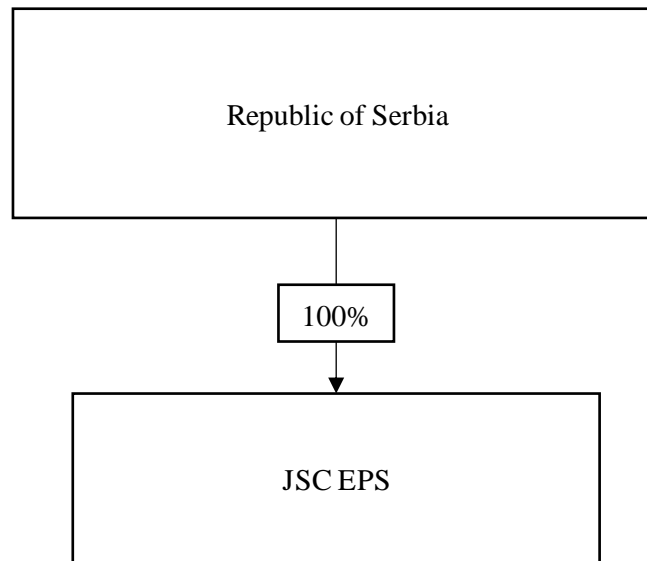
All actions required by applicable EBRD procedures relevant to the prevention of money laundering, terrorist financing and other integrity (including sanctions) issues have been taken with respect to the Project, and the Project files contain the integrity checklists and other required documentation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

**ANNEXES TO OPERATION REPORT**

ANNEX 1	SHAREHOLDING STRUCTURE
ANNEX 2	HISTORICAL FINANCIAL STATEMENTS
ANNEX 3	GREEN ASSESSMENT
ANNEX 4	SERBIA MACROECONOMIC UPDATE & SOVEREIGN DEBT ASSESSMENT
ANNEX 5	PROJECT IMPLEMENTATION
ANNEX 6	PROJECT DESCRIPTION
ANNEX 7	EPS LIQUIDITY LOAN – UPDATE ON PROGRESS

## ANNEX 1 – SHAREHOLDING STRUCTURE

EPS is a public utility 100% directly owned by the Government of Serbia.



## ANNEX 2 – HISTORICAL FINANCIAL STATEMENTS

Financials for 2020-2022 have been sourced from audited IFRS financial reports, while the half-year results are based on management reports under local accounting standards which are broadly aligned with IRFS. EPS is audited by PwC, according to whose latest report the financial statements “present fairly, in all material respects, the consolidated financial position of EPS”.

### PROFIT AND LOSS - Consolidated report EUR '000

	31 Dec 20 Audit	31 Dec 21 Audit	31 Dec 22 Audit	[REDACTED]	[REDACTED]
Income from sales of goods and services	2,093,136	2,607,077	3,015,281		
Other revenues	40,719	31,782	30,552		
Income from premiums, subventions, grants and donation	21,931	81,437	57,993		
<b>Total revenues from operation</b>	<b>2,155,786</b>	<b>2,720,297</b>	<b>3,103,826</b>		
Production materials	(532,766)	(1,606,329)	(2,481,255)		
Production services	(263,467)	(193,988)	(184,308)		
Personnel cost	(529,664)	(416,034)	(401,577)		
Other operating cost	(233,120)	(301,986)	(335,579)		
<b>EBITDA</b>	<b>596,768</b>	<b>201,961</b>	<b>(298,893)</b>		
Depreciation	(428,632)	(299,935)	(306,507)		
<b>EBIT</b>	<b>168,136</b>	<b>(97,974)</b>	<b>(605,401)</b>		
Financial income	99,784	40,057	28,494		
Financial costs	(17,242)	(54,552)	(71,574)		
Interest	(10,508)	(14,218)	(33,948)		
Negative forex costs	(4,118)	(37,913)	(37,216)		
Other financial cost	(2,616)	(2,421)	(410)		
Other income	48,765	50,910	-		
Other costs	(161,690)	(73,145)	-		
Income from adjustments of other assets carried at fair value	6,938	57,684	-		
Expenses from adjustments of other assets carried at fair value	(107,865)	(50,246)	-		
Other costs	(60,763)	(80,582)	-		
<b>EBT</b>	<b>137,752</b>	<b>(134,705)</b>	<b>(648,480)</b>		
Corporate tax	(46,978)	2,936	20,229		
<b>Net Income</b>	<b>90,774</b>	<b>(131,769)</b>	<b>(628,251)</b>		

**BALANCE SHEET - Consolidated report**  
**EUR '000**

		<b>31 Dec 20</b>	<b>31 Dec 21</b>	<b>31 Dec 22</b>		
		Audit	Audit	Audit		
-						
-	<b>Assets</b>					
-	Inventories	295,834	276,677	281,752		
-	Trade receivables	483,377	533,713	543,128		
-	Other trade receivables	2,641	1,077	1,745		
-	Short term financial investments	1,855	2,114	2,590		
-	Other current assets/accruals	79,039	144,222	169,099		
-	Cash and cash equivalents	173,369	114,658	120,304		
-	<b>Total current assets</b>	<b>1,036,114</b>	<b>1,072,461</b>	<b>1,118,620</b>		
-	Property, plant and equipment	6,587,511	6,961,042	7,045,873		
-	Intangible assets	143,839	107,623	86,398		
-	LT financial investments	42,655	30,764	145,037		
-	<b>Total non current assets</b>	<b>6,774,005</b>	<b>7,099,429</b>	<b>7,277,308</b>		
-	<b>TOTAL ASSETS</b>	<b>7,810,120</b>	<b>8,171,890</b>	<b>8,395,928</b>		
-						
-	<b>Liabilities</b>					
-	Trade payables	409,775	619,733	804,651		
-	Other trade payables	237,175	195,862	774,551		
-	Short-term debt	156,434	463,275	443,699		
-	<b>Total current liabilities</b>	<b>803,384</b>	<b>1,278,870</b>	<b>2,022,900</b>		
-	Long term provisions	346,925	323,181	261,595		
-	Non-current financial debt	915,250	789,830	971,713		
-	Other short-term liabilities/accruals	633,167	654,996	643,529		
-	<b>Total non current liabilities</b>	<b>1,895,342</b>	<b>1,768,006</b>	<b>1,876,837</b>		
-	<b>TOTAL LIABILITIES</b>	<b>2,698,726</b>	<b>3,046,876</b>	<b>3,899,737</b>		
-						
-	<b>Equity</b>					
-	Reserves	3,604,900	3,811,183	3,813,679		
-	Retained earnings	(1,530,068)	(1,729,639)	(2,381,993)		
-	Other Equity and unrealised gain/(loss) from securities	(25,205)	(25,591)	(25,686)		
-	Paid-in capital	3,061,766	3,069,062	3,072,933		
-	NCI	-	-	17,258		
-	<b>TOTAL EQUITY</b>	<b>5,111,394</b>	<b>5,125,014</b>	<b>4,496,191</b>		
-	<b>TOTAL EQUITY AND LIABILITIES</b>	<b>7,810,120</b>	<b>8,171,890</b>	<b>8,395,928</b>		

**CASH FLOW - Consolidated report**  
**EUR '000**

	31 Dec 20 Audit	31 Dec 21 Audit	31 Dec 22 Audit		
-					
<b>Operating activities</b>					
- Cash inflow sales and advances received	2,299,413	2,327,621	2,465,567		
- Other proceeds from operating activities	23,463	12,410	15,950		
- Operating expenses	(1,399,314)	(1,450,378)	(1,977,121)		
- Cash payments of other taxes and contributions	(496,555)	(471,897)	(432,641)		
- Interest paid	1,449	(1,715)	(28,883)		
- Paid tax	(28,269)	(81,247)	(36,971)		
- Cash flow from operating activities	400,187	334,793	5,901		
<b>Investment activities</b>					
- CAPEX	(405,899)	(431,257)	(491,937)		
- Sale of intangible assets, PPE and biological assets	-	110	210		
- Other financial investments (net inflows)	-	8,257	(1,829)		
- Interest received from investing activities	10,328	3,344	11,786		
- Other financial outflows (net)	(35,370)	(10)	-		
- Cash flow from investment activities	(430,941)	(419,556)	(481,770)		
<b>Financial activities</b>					
- Cash receipts from loans	167,454	210,350	832,720		
- Cash repayment of loans	(138,805)	(157,225)	(349,152)		
- Interest net	-	-	-		
- Paid dividends	(3)	(25,516)	-		
- Finance lease	(2)	(1,162)	(567)		
- Other liabilities and increase in share capital	(488)	(497)	(283)		
- Cash flow from financial activities	28,155	25,949	482,717		
-					
- Forex translation adjustment	(141)	(5)	(980)		
- Net cash	(2,599)	(58,814)	6,848		
- Cash balance at the beginning of period	176,114	173,380	114,641		
- Cash balance at the end of period	173,373	114,561	120,510		

[REDACTED]

## ANNEX 3 – GREEN ASSESSMENT

The project has been assessed as ‘aligned’ for mitigation and adaptation. For mitigation, the project is on the ‘aligned’ list under “rehabilitation and desilting of existing hydropower plants”. For adaptation, the risks of extreme mass movements and floods for three locations are mitigated, and the project does not undermine broader climate resilience. Physical climate risk of the counterparty (Government of Serbia) is low (3) under EBRD’s sovereign climate risk methodology. Carbon transition risk score is 2 due to sovereign counterparty. Furthermore, the project has received both climate mitigation and climate adaptation GET attributions.

### Paris alignment assessment

#### *Alignment with the mitigation goals of Paris Agreement: general screening*

- The project/economic activity is **included** in the 'aligned list'.
- Regarding project/economic activity(ies), there are **no** activities included in the 'non-aligned list'.

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

- **Evaluation of the physical climate risk and vulnerability context:** screening indicated potential risk of extreme mass movements at cascades 1 and 3 and flood at cascade 2.
- **Definition of climate resilience measures:** technical due diligence highlighted:
  - Low risk of extreme mass movements due to the abundant vegetation, especially in the forested area, contributing to absorbing strong precipitation and preventing soil erosion.
- EPS-internal modelling has estimated the magnitude of various possible floods, including 1-1000-year events. The analysis, which was reviewed by the technical consultant, demonstrates that the Vlasina reservoir has enough capacity to provide retention of peak flows associated with such events: usual operation procedure limits water elevation in the Vlasina lake to a level that allows for the accommodation of 1000-year flood events. Furthermore, under the flood evacuation concept in place, two independent systems are in place to evacuate floodwaters if needed: spillway and bottom outlet. Thus, flood risk is assessed as non-material. **Appraisal of broader climate resilience context:** Rehabilitation of cascade does not undermine the climate resilience of the wider system and does not contravene relevant national legislation or action plans on adaptation.

### GET attribution

Climate mitigation: 100% of proceeds will go towards the rehabilitation of Vlasinske cascade. The Project is expected to yield additional 16,600 MWh of renewable energy/annum, leading to a reduction in GHG emissions estimated at 11,250 tonnes of CO<sub>2</sub> annually.

Climate adaptation: the Project will deliver increased energy availability benefits against a background of increasing hydrological variability. Although generally abundant in water bodies, Serbia, over the last decade but particular in 2022, has suffered from increasingly frequent and severe seasonal droughts, which have interfered with electricity production from hydropower assets. The replacement of the current generation units (turbines and generators) and hydro-mechanical equipment through new groups will render the cascade more “climate resilience efficient”: per unit of water (m<sup>3</sup>) consumed, an estimated 2-3% of additional output will be produced thanks to the more efficient generation units.

## ANNEX 4 – SERBIA MACROECONOMIC UPDATE & SOVEREIGN DEBT ASSESSMENT

### Macroeconomic update

**Economic activity is moderating.** In line with the adverse global macroeconomic environment, GDP growth slowed to 2.3 per cent year-on-year in 2022 and continued at a muted pace of 0.7 per cent in the first quarter of 2023 before accelerating to 1.7 per cent in the second quarter of the year. Household consumption growth gradually slowed down, ultimately contracting by the first quarter of 2023 as inflation remained firmly in double-digits. Construction activity declined in line with muted investment growth, but rebounded in the second quarter as implementation of sizeable public infrastructure projects began. The current account deficit widened to 6.9 per cent of GDP in 2022 on the back of an increased energy import bill and weakening external demand but is expected to moderate to under 5 per cent of GDP in 2023 as energy import prices decline and domestic power production stabilises. FDI inflows fully financed the current account deficit in 2022, reaching a record high of €4.4 billion in nominal terms as investments from China rose to make up 32 per cent of the inflow, on top of robust investment from the EU, with the strong performance continuing into the first five months of 2023. Driven by food and oil prices but becoming increasingly broad-based, inflation reached decade highs at 16.2 per cent in March 2023, before moderating to 12.5 per cent by July 2023. Inflation peaked later in Serbia compared to the other Western Balkans countries and the Eurozone (where inflation had started to decelerate by end-2022) and is decelerating at a more moderate pace, as the cost-induced price shock is gradually passed through, spurred by ongoing increases of regulated energy prices. The National Bank of Serbia gradually tightened monetary conditions in response, increasing the policy rate from 1 per cent in March 2021 to 6.5 per cent in July 2023, held constant as of September.

**Growth is to remain subdued in the near-term, as risks tilt towards the downside.** Economic growth is expected to slow down further to 1.8 per cent in 2023 before returning closer to its medium-term potential at 3.5 per cent in 2024 in line with global recovery ([REDACTED] EBRD REP, September 2023). The expected slowdown in Eurozone export markets are to weigh on external demand, still high inflation will continue eroding disposable incomes and tight financial conditions on local and external markets, reflected in a slowdown of credit growth, will further dampen domestic demand. Early elections could further slow the implementation of public investments and economic reforms, including those related to key benchmarks under the IMF programme. The medium-term outlook remains robust, underpinned by macroeconomic stability, a record of strong public and foreign investments and a commitment to reform anchored by the EU approximation process.

### Debt Assessment

**Public debt has increased.** Despite a significant fall since 2015, Serbia's public debt remained above 45 per cent of GDP prior to the pandemic. 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. Unlike other countries in the Western Balkan region, Serbia did not access the Rapid Financing



Instrument from the IMF or other official sources during 2020-21 to finance the fiscal gap, stepping up domestic and external borrowing instead. Public debt increased from 52.8 per cent of GDP in 2019 to 57.8 per cent of GDP in 2020 before declining to 55.6 per cent of GDP by end-2022. In an environment of large external and fiscal financing needs at the time of globally tight financial markets, authorities agreed on a two-year Stand-by Agreement programme with the IMF in the total amount of EUR 2.4bn, centred on energy reforms. In January 2023, Serbia returned to the external market via two issuances, a five-year Eurobond in the amount of USD 750mn at 6.25 per cent and a 10-year Eurobond in the amount of USD 1bn at 6.50 per cent, and hedged the issuances against the euro. Significant oversubscription and good pricing given the market conditions demonstrate continued investor confidence in the Serbian economy. International reserves reached a record high of EUR 23.1bn in end-July 2023 on account of repeated access to external funding, strong remittances and exports. The fiscal deficit came in lower than expected at just over 3 per cent in 2022, while the budget deficit target for 2023 was lowered to 2.8 per cent in a budget rebalance adopted in September, as additional expenditure measures to soften the impact of the cost-of-living shock on the population were balanced against a reduced fiscal impact of energy prices given stabilising electricity production, higher than planned tax revenues propped up by inflation and an increase in excise duties on fuel, tobacco, alcohol from October expected to boost revenues.

**...but is considered manageable.** The IMF (Country report, July 2023) assesses public debt as sustainable, noting it is relatively low compared to peers and expecting it to remain on a downward path thanks to expected medium-term fiscal consolidation and growth recovery. 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 Stand-By Arrangement. Main vulnerability to the public debt sustainability stems from the large share of foreign currency debt, though this is mitigated by the large share of multilateral and institutional creditors to whom external debt is owed, the long average maturity of outstanding debt and the high share of fixed interest rate debt. The energy sector remains a source of risk in the near term which could put additional pressure on the government budget, should additional shocks realise. Liquidity is supported by high international reserves, availability of financing from development partners and bilaterals and a track record of high FDI inflow.

Serbia is rated at BB+ (Stable) by Fitch, affirmed in August 2023, BB+ by S&P with a Stable outlook as affirmed in April 2023 (the outlook was revised from Positive to Stable in June 2022 due to the Russia-Ukraine conflict fallout) and Ba2 (Stable) by Moody's as affirmed in March.

## ANNEX 5 – PROJECT IMPLEMENTATION

### Procurement classification – *Public sovereign*

[REDACTED]. The Borrower implemented other EBRD financed projects including Kolubara and EPS Hydropower Plants. [REDACTED] the Borrower has a very strong technical capacity demonstrated by successfully completion of similar rehabilitation works on other Hydropower Plants financed by KfW. [REDACTED].

[REDACTED]. [T]he Borrower has appointed the consultancy firm Energoprojekt Hidroinženjering a.d. to act as PIU Consultant and be responsible for the development of the Technical Specification/ Employers Requirements, preparation of the Tender Documents for Works and support in the Procurement, Tendering and Evaluation of offers. Additionally, the Borrower will be supported by a Supervision Engineer Consultant who will be responsible for the day-to-day administration of the works contract.

#### *Contracts risk assessment*

*- High*

The Project envisages two contracts: one for procurement of works concerning the rehabilitation of the Vlasinske HPP and one for the supervision of services for the respective works.

The rehabilitation of the Vlasinske HPP it been considered by the EBRD Due Diligence Consultant (Gruner) a complex difficult contract since it will require the future contractors to be responsible for the final designs, and be in charge with coordinating EPS personnel in charge with dismantling certain installation as well as of the nominated subcontractor that will be responsible for supply and installation of Control Systems and for Excitation and Electrical Braking System. This will require the participation in the tendering process of companies with strong understating of the Borrower's infrastructure and could act as detent in participation in the tendering process.

To mitigate such risk a multi stage tendering process will be used to enable the Borrower and the prospective participants to have a dialog on the technical, commercial and financial requirements. Additionally, prior to the launching of the tendering process, the Bank will request the Borrower and its consultant to conduct a market sounding exercise to identify the prospective participants and establish realistic qualification, technical and commercial requirements.

With respect to the procurement of supervision services, it is estimated that such contract will not pose procurement challenges.

#### **Project implementation arrangements:**

The Company will appoint a PIU which will be supported by a PIU Support Consultant and by a Supervision consultant.

#### **Procurement arrangements:**

The project envisages two contracts:

1. A works contract for Reconstruction of the Vlasinske HPP to be procured through multi stage open tender in accordance with Chapter 3 of the Bank's PP&R for public sector operations and FIDIC Yellow Book General Conditions of Contract
2. Supervision of Reconstruction of the Vlasinske HPP - to be procured through Single Stage Open tender in accordance with Chapter 3 of the Bank's PP&R for public sector operations and EBRD Standard Procurement Documents for Consultancy Services.

With respect to the contract for Reconstruction of the Vlasinske HPP the Bank, independent Due Diligence Consultant has identify that due to the need for standardisation with existing equipment and the exclusive rights or availability for certain equipment and software the future contractor will have to appoint as nominated subcontractor Institute Mihajlo Pupin, for the supply and delivery of Control System(including control and SCADA equipment), including) and Institute Nikola Tesla for the for Excitation and Electrical Braking System. [REDACTED]. All contracts will be subject to prior review by the Bank. [REDACTED].

## ANNEX 6 – PROJECT DESCRIPTION

### Project description

The Project targets the rehabilitation of Vlasinske hydro power plant, owned by EPS, for the purpose of extending its useful life and improving its operating performance, as well as allowing for further development of the renewable energy in the country.

The HPP Vlasinske is located in the south-east corner of Serbia, right at the limit of the south-west Danube water catchment, close to Bulgarian and North Macedonian borders.



The Vlasinske HPP system consists of the reservoir of the Vlasina Reservoir with supply channels, four HPPs, namely Vrla 1, 2, 3, 4, and the Lisina Pump Station System with its reservoir on the Božica River. The system was constructed in two phases. As part of the first construction phase (1946-1958), half of the envisaged turbine units were installed (two Pelton turbine units placed at HPP Vrla 1 and one Francis turbine unit placed at each of HPPs Vrla 2, 3 and 4). For the second construction phase (1972-1977), the remainder half of the turbines were installed along their penstocks and other ancillary mechanical and electrical equipment.

The installed discharges of the power plants are 8 m<sup>3</sup>/s for the first phase units and 10 m<sup>3</sup>/s for second phase units. The total installed power of phase I units is 56.9 MW; phase II capacity is 71.8 MW, summing to 128.7 MW of installed capacity for the entire Vlasinske HPPs.

The Lisina Pump Station System (“PSS”), built during the second phase, is equipped with two one-stage centrifugal pumps with a power of 13.4 MW each. The table below presents the elemental information of each of the HPPs and the Lisina PSS.

HPP (PSS*)	Vrla 1	Vrla 2	Vrla 3	Vrla 4	Lisina *
Number of units	4	2	2	2	2

Capacities	2x11.2+ 2x14.15 MW	10.5+13.3 MW	12.8+16.75 MW	11.2+13.64 MW	2x13.4 MW
Year of commissioning – phase I	1955	1954	1957	1958	
Year of commissioning – phase II	1975	1975	1975	1975	1975
Average annual energy production (consumption*)	98.6 GWh	54.2 GWh	75.9 GWh	66.2 GWh	1.4 GWh*

For its operation, HPP Vrla 1 uses water from Vlasinsko Reservoir, the active storage capacity of which is 107 million m<sup>3</sup>. HPP Vrla 2, 3, 4 have reservoirs/compensation basins for daily balancing of water, with active storage capacity of 100, 30 and 50 thousand m<sup>3</sup>, respectively, and generate electricity based on discharge released from HPP Vrla 1 and intermediate inflows, i.e. the Vrla River (HPP Vrla 2 and 3), the Bitvrdje River and Gradski Potok (HPP Vrla 2), the Romanovska River (HPP Vrla 3) and the Masuricka River (HPP Vrla 3 and 4). Downstream from the last cascade, water is released finally into the South Morava River.

The image below presents a geographical map of the plants' locations.



All HPP units are in operation but are relatively old (from 40 to 60 years, i.e. exploited for 150,000 to 180,000 working hours). As such, casual malfunction of individual units due to the long exploitation period leads the whole cascade to generate with reduced power, hence causing the HPPs to produce at a reduced capacity of 60–80 MW. New equipment will then provide secure exploitation of the HPPs, which will significantly improve balancing and stability of the electric and energy system and allow further implementation of the RES. From an economic standpoint, the reconstruction will increase the installed capacity of Vlasinske HPPs by c. 8 MW, from 129 MW to 137 MW, by (i) increasing the flow through phase I units [REDACTED] and phase II units [REDACTED], and (ii) increasing efficiency level [REDACTED].

It is forecasted that the average annual production of Vlasinske HPPs will [REDACTED] due to the rehabilitation works. Furthermore, the Project implementation will prevent environmental pollution, including the possibilities for oil leakage, lower energy self-consumption, lower need for technical water, reduction of

pollution. Finally, the Project allows maintaining employment levels, with some potential increase, favouring economic development in underdeveloped municipality of Surdulica where HPP Vlasinske is located. [REDACTED].

## **ANNEX 7 – EPS LIQUIDITY LOAN – UPDATE ON PROGRESS**

On 8 February 2023, the Board approved EUR 300 million liquidity loan to EPS, with a caveat that the commitments made by EPS as part of this project should be closely monitored and reported upon expiry of 18 months since the approval date. The loan proceeded with signing on 15 March 2023, after which EPS and the team have been working closely and intensively to meet the Conditions Precedent towards the first disbursement. To date Tranche 1 in the amount of EUR 200 million has been fully disbursed as all the conditions precedent have been met most importantly launching of the renewables auctions. [REDACTED].

In addition, the Company committed to a number of measures to be implemented with regards to decarbonisation as well as improvements in corporate governance with the help of consultants to be engaged by the bank the most important ones including i) adoption and start of implementation of de-carbonization action plan [REDACTED]; implementation of TCFD [REDACTED] 5, iii) improvement in risk management iv) appointment of full time general manager and v) improvements in economic inclusion and gender equality. [REDACTED].