

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

Approved by the Board of Directors on 24 January 2024<sup>1</sup>

**UKRAINE**

**RLF - HYDRO POWER PLANTS EMERGENCY  
RESTORATION**

*[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**

BDS/UK/18-1 (F)	EBRD's Strategy for Ukraine
BDS18-237 (F)	EBRD's Energy Sector Strategy
bn	billion
c.	Circa
CAPEX	Capital Expenditure
CMU	Cabinet of Ministers of Ukraine
DAM	Day-ahead market
DD	Due diligence
DSCR	Debt Service Cover Ratio
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
EPG	Economic, Policy & Government department
ESAP	Environmental and Social Action Plan
ESD	Environmental and Social Department
ESDD	Environmental and Social Due Diligence
ESP	Environmental and Social Policy
ETI	Expected transition impact
EUR	Euro currency unit
FiT	Feed-in-tariff
FX	Foreign Exchange
GB	Guaranteed Buyer
GDP	Gross Domestic Product
GET	Green Energy Transition
GW	Gigawatt
HPP	Hydroelectric Power Plant
PSPP	Pump Storage Power Plant
IFI	International Financial Institution
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
kW	Kilowatt
kWh	Kilowatt hours
LGD	Loss Given Default
m	million
N/A	Not applicable
NPP	Nuclear Power Plant
OCCO	Office of the Chief Compliance Officer
PC	Physical Climate
PD	Probability of default
PIU	Project Implementation Unit
PPR	Procurement Policies and Rules
PJSC	Private joint stock company
PSD	Project Summary Document
PSO	Public Service Obligations
RAROC	Risk Adjusted Return on Capital
RES	Renewable energy sources
RLF	Resilience and Livelihoods Framework
TC	Technical cooperation
TI	Transition Impact

TSO	Transmission System Operator of Ukraine
UAH	Ukrainian Hryvnia
USD	United States Dollar
UHE	PJSC Ukrhydroenergo
USS	Universal Service Supplier

### CURRENCY EQUIVALENTS

1 EUR                      39.6 UAH

### WEIGHTS AND MEASURES

1 Megawatt        (MW)    = 1,000 kilowatts ( $10^3$  kW)  
1 Gigawatt        (GW)    = 1 million kilowatts ( $10^6$  kW)  
1 Megawatt-hour (MWh) = 1,000 kilowatt-hours ( $10^3$  kWh)  
1 Gigawatt-hour (GWh) = 1 million kilowatt-hours ( $10^6$  kWh)

## PRESIDENT'S RECOMMENDATION

This recommendation and the attached Report concerning an operation in favour of PJSC “Ukrhydroenergo” (the “Company” or “UHE”), a company registered in Ukraine, are submitted for consideration by the Board of Directors.

EBRD is to provide a sovereign guaranteed loan to the Company in the amount of up to EUR 200 million. The loan will consist of two components: (1) up to EUR 150 million to finance supply of critical equipment for the Dnipro and Serebniodnipro hydro power plants, and (2) up to EUR 50 million for the emergency liquidity support (the “Project”). The loan facility will be divided into two tranches of up to EUR 100 million each with one tranche to be funded by EBRD and the other one using funds advanced to EBRD for that purpose by Cassa Depositi e Prestiti S.p.A., a development bank established under the laws of Italy, in its capacity as manager, on behalf of the Ministry of the Economy and Finance of the Italian Republic, of the Revolving Fund for Development Cooperation. Both tranches will benefit from a sovereign guarantee to be provided by Ukraine.

The Project holds significant importance in ensuring the continued stable and safe production of electricity, while also addressing the [REDACTED] liquidity needs of the Company. The primary transition impact of the Project is driven by the need to support the resilience of the Company, its financial standing and operations, as well as to enhance energy security of Ukraine by providing vital financial support to restore and maintain production capacities of UHE (*Resilient*). The implementation of the Project will enable the Company to replace the damaged or highly amortized critical equipment for the Dnipro and Serebniodnipro hydro power plants and allow to increase its operational efficiency, hydro powered electricity generation capacities and energy production volumes (*Green*).

TC support for this Project is provided by the EBRD Shareholder Special Fund.

I am satisfied that the operation is in line with the War on Ukraine – EBRD Resilience Package endorsed by the Board and consistent with the objectives of the War on Ukraine - EBRD Resilience Package - Resilience and Livelihoods Framework, which aims to help citizens, companies and countries affected by the war in Ukraine. The operation is consistent with the Bank’s Strategy for Ukraine, Equality of Opportunity Strategy and the Energy Sector Strategy 2024-2028 .

The Project requires a derogation from the Bank’s Environmental and Social Policy as the Bank cannot undertake a meaningful Environmental and Social Due Diligence due to the ongoing war and associated security risks. An independent environmental and social audit is required to be undertaken both on the Project [REDACTED].

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

**Odile Renaud-Basso**

## BOARD DECISION SHEET

<b>Ukraine – RLF - Hydro Power Plants Emergency Restoration - DTM 54753</b> <b>Framework: Ukraine - Resilience and Livelihoods Framework - DTM 53662</b>	
<b>Transaction/ Board Decision</b>	Board approval <sup>1</sup> is sought for a senior sovereign guaranteed loan of up to EUR 200 million to be provided by EBRD in favour of PJSC “Ukrhydroenergo” (the “Company” or “UHE”), a state owned company established in Ukraine. The loan will consist of two components: (1) up to EUR 150 million to finance supply of critical equipment for the Dnipro and Seredniodnipro hydro power plants, and (2) up to EUR 50 million for the emergency liquidity support for the Company. The loan will be divided into two tranches of EUR 100 million each with one tranche to be funded by EBRD (the “EBRD Funded Tranche”) and the other one using funds advanced to EBRD for that purpose by Cassa Depositi e Prestiti S.p.A., a development bank established under the laws of Italy, in its capacity as manager, on behalf of the Ministry of the Economy and Finance of the Italian Republic, of the Revolving Fund for Development Cooperation (“CDP”) (the “Italy Funded Tranche”) by means of subscribing to a medium term note to be issued by EBRD. The disbursement of both tranches will be processed by EBRD. [REDACTED].
<b>Client</b>	UHE is a 100% state owned enterprise, Ukraine’s main hydropower generation company and the Bank’s long-standing Client, which owns and operates HPPs and PSPPs with a total nominal capacity of 5.8GW. [REDACTED]
<b>Main Elements of the Proposal</b>	<u>Transition impact</u> <b>Primary Quality – Resilient.</b> The Project will support the financial standing and operations of the Company and strengthen Ukraine’s energy security, by providing emergency financial support to restore and maintain UHE’s electricity production capacities and address its critical liquidity needs. <b>Secondary Quality – Green.</b> The loan facility will be used to finance procurement of critical equipment for the Dnipro and Seredniodnipro HPPs that were affected by the Russian missile strikes. <u>Additionality:</u> Financing Structure (financing that is not available in the market and EBRD financing effectively bridges a financing gap), Risk mitigation (absorbing risk in Ukraine) and Standard-setting (UHE makes use of EBRD expertise on best international procurement standards). <u>Sound banking:</u> The Project will be co-financed together with Italy and will benefit from the sovereign guarantee from Ukraine. [REDACTED].
<b>Key Risks</b>	Key risks include: (i) implementation risk; (ii) UHE’s credit risk; (iii) political, military damage and macro-economic risks; (iv) volume generation risk. The (i) risk is mitigated by limiting the scope to supply only and carrying out market sounding to confirm market appetite and capabilities to supply the equipment. [REDACTED].
<b>Strategic Fit Summary</b>	The Project is in line with the War on Ukraine – EBRD Resilience Package endorsed by the Board and consistent with the objectives of the War on Ukraine - EBRD Resilience Package - Resilience and Livelihoods Framework, which aims to help citizens, companies and countries affected by the war in Ukraine. The operation is consistent with the Bank’s Strategy for Ukraine, Equality of Opportunity Strategy and the Energy Sector Strategy 2024-2028.

<sup>1</sup> Article 27 of the AEB provides the basis for this decision.

## ADDITIONAL SUMMARY TERMS FACTSHEET

<b>EBRD Transaction</b>	A senior sovereign guaranteed loan of up to EUR 200 million (the “Loan”) to be provided by EBRD to the PJSC “Ukrhydroenergo” (the “Company”, “Ukrhydroenergo”, or “UHE”) to finance the following needs: (1) up to EUR 150 million to finance supply of critical equipment for the Dnipro and Seredniodnipro hydro power plants (“CAPEX Component”), and (2) up to EUR 50 million for the emergency liquidity support of the Company (“Liquidity Support Component”). The Loan will be divided into two tranches of up to EUR 100 million each with one tranche to be funded by EBRD (the “EBRD Funded Tranche”) and the other one using funds advanced to EBRD for that purpose by Cassa Depositi e Prestiti S.p.A., a development bank established under the laws of Italy, in its capacity as manager, on behalf of the Ministry of the Economy and Finance of the Italian Republic, of the Revolving Fund for Development Cooperation (the “Italy Funded Tranche”).
<b>Existing Exposure</b>	<b>Ukrhydroenergo:</b> Total debt (all sovereign or sovereign guaranteed): EUR 158.8m (portfolio)/EUR 83m (operating assets), consisting of: <ul style="list-style-type: none"> <li>• Hydro Power Plant Rehabilitation Project (40518), sovereign exposure [REDACTED].</li> <li>• Hydro Generation Rehabilitation Programme (47947), sovereign guaranteed exposure [REDACTED].</li> </ul> <b>Sovereign:</b> Total amount of debt: EUR 2,060m (portfolio) [REDACTED].
<b>Maturity / Exit / Repayment</b>	<ul style="list-style-type: none"> <li>• [REDACTED]</li> <li>• <b>CAPEX Component:</b> 15 year tenor [REDACTED].</li> <li>• <b>Liquidity Support Component:</b> 5 year tenor [REDACTED].</li> </ul>
<b>Potential AMI eligible financing</b>	N/A
<b>Use of Proceeds - Description</b>	<p><b>CAPEX Component:</b> up to EUR 150m will be used to finance supply of 4 new hydropower generation units for the Dnipro HPP and 2 gantry cranes for the Seredniodnipro HPP [REDACTED] as well as the services of the Project Implementation Unit Consultant (the PIU Consultant).</p> <p><b>Liquidity Support Component:</b> up to EUR 50m will be used to finance emergency liquidity support for the purposes of stable functioning of the Company’s operations, including procurement of electricity, and transmission and dispatching services.</p>
<b>Investment Plan</b>	<ul style="list-style-type: none"> <li>• Critical equipment for HPPs and consultancy services to support Project implementation (up to EUR 150m).</li> <li>• Emergency liquidity support expenses as described in Use of Proceeds section (up to EUR 50m).</li> </ul>
<b>Financing Plan</b>	[REDACTED]
<b>Key Parties Involved</b>	<ul style="list-style-type: none"> <li>• PJSC Ukrhydroenergo (the Borrower);</li> <li>• Ukraine (the Guarantor);</li> <li>• Italian Republic acting via Cassa Depositi e Prestiti (CDP) (concessional loan provider).</li> </ul>
<b>Conditions to subscription / disbursement</b>	[REDACTED]
<b>Key Covenants</b>	[REDACTED]
<b>Security / Guarantees</b>	Sovereign guarantee from Ukraine.
<b>Other material agreements</b>	[REDACTED]
<b>Associated Donor Funded TC and Blended Concessional Finance</b>	<p><b>A. Technical Cooperation (TC):</b>  <i>Pre-signing:</i> <b>TC: Legal Advisory Services</b> to assist with preparation of relevant legal documentation in relation to anticipated transaction due to the complexity of the legal and funding arrangements between key stakeholders (EBRD, Italy, Ukraine and UHE). The cost of the assignment is up to EUR 70,000 and it is to be financed by the EBRD Shareholder Special Fund.  <i>Post-signing:</i> N/A  <i>Client contribution:</i> The Company is expected to provide financial contribution to the Project by financing the services of PIU Consultant from loan proceeds in the amount of up to EUR 1 million.</p> <p><b>B. Blended Concessional Finance/ guarantees:</b> The EBRD loan will be complemented by a concessional loan from Italy in the amount of EUR 100m to cover 50% of risk exposure under the Project.</p>

[REDACTED]

# INVESTMENT PROPOSAL SUMMARY

## 1. STRATEGIC FIT AND KEY ISSUES

### 1.1 STRATEGIC CONTEXT

PJSC “Ukrhydroenergo” (“UHE” or the “Company”) is a 100% state owned enterprise and Ukraine’s main hydropower generation company. [REDACTED].

The Company is of significant importance for the Ukraine’s electricity system as it is one of the major sources of cheap and green energy in the country. UHE also provides such critical services as peaking electricity generation, frequency and capacity regulation, and reliable emergency reserve to the power system of Ukraine. UHE’s generating units are a major contributors to the stability and quality of the national electricity network. In addition, UHE together with Energoatom, the state owned nuclear power plants operator, are responsible for the Public Service Obligations (“PSO”), a mechanism, which allows to supply the Ukrainian households with electricity at a subsidized price that remains to be extremely important in a context of their declining wealth and purchasing power.

[REDACTED]. The Project will complement the Bank’s other recent activities in the energy sector aimed at maintaining stable and secure functioning of the Ukraine’s energy system during the war environment as well as the Bank’s existing engagement with UHE in the context of the Hydro Power Plants Rehabilitation Programme (combined under OpID 47947 and 40518), related to rehabilitation of 39 hydropower units with total installed capacity of 2 GW spread over eight hydro power plants on the Dnipro Cascade (the “Programme”). [REDACTED]. The Project is in line with the War on Ukraine – EBRD Resilience Package endorsed by the Board and consistent with the objectives of the War on Ukraine - EBRD Resilience Package - Resilience and Livelihoods Framework, aimed to help citizens, companies and countries affected by the war in Ukraine. The Project specifically targets Resilience and Livelihoods programme focusing on energy security in Ukraine through replacement of the critical equipment needed to maintain an efficient and safe electricity production by the hydro power plants. The Project is also in line with the Strategy for Ukraine and the Energy Sector Strategy 2024-2028 as it will strengthen energy security in the country.

### 1.2 TRANSITION IMPACT

The table below sets out the TI Objectives and details of the project.

#### Primary Quality: Resilient

Obj. No.	Objective	Details
1.1	<i>The sub-operation supports the Resilient quality of the FW through Energy security measures, strengthening municipal service providers directly affected by the wider economic consequences of the war, facilitating imports and exports of production equipment</i>	The implementation of the Project will enhance Ukraine's energy security by financing the replacement of 4 hydropower generation units at the Dnipro HPP, which were worn out due to extensive exploitation since 2003, and further damaged by missile attacks. The total production capacity is expected to increase [REDACTED]. The Project will also enable UHE to replace the gantry cranes used on the Seredniodnipro HPP [REDACTED]. The cranes are critical for the maintenance of HPPs [REDACTED]. In addition, the liquidity support component of the Project will help to improve the resilience of the Company, its financial standing and operations, particularly on the back of increased PSO obligations.

	<i>and related materials (capital goods) and TF-related technical assistance, or supporting businesses directly affected by the conflict (i.e., in Ukraine, including those trying to relocate) and businesses indirectly affected (Ukraine part of value chain).</i>	
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### Secondary Quality: Green

Obj. No.	Objective	Details
2.1	<i>The sub-operation supports the Green quality of the FW.</i>	After the Project implementation, the production capacity of 4 hydraulic units will increase [REDACTED], which will lead to increase of electricity generation volumes of respective hydraulic units [REDACTED].

### 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> ).	Since 2011, the Bank, in coordination with European Investment Bank, has been financing the rehabilitation programme of the UHE's core assets within the Hydro Power Plant Rehabilitation Project (40518) signed in 2011, and its subsequent continuation within the Hydro Generation Rehabilitation Programme (47947). EBRD's assistance is needed now to address UHE's critical Capex and liquidity needs due to damages caused by the Russian missile strikes and shelling.
<b>Additionality sources</b>	<b>Evidence of additionality sources</b>
<b>Financing Structure:</b> EBRD offers financing that is not available in the market from commercial sources on reasonable <b>terms and conditions</b> , e.g. a longer grace period. Such financing is necessary to structure the project. Crisis response: EBRD financing effectively bridges a financing gap due to adverse market conditions.	EBRD is offering financing, which is not available on the market [REDACTED].  EBRD financing will be supplemented by concessional loan from Italy, relying on country and sector expertise of the Bank. CAPEX Component will be provided with 15-year tenor [REDACTED]. Liquidity Component will be provided with 5-year tenor [REDACTED].
<b>Risk mitigation:</b> EBRD's ability to absorb risk in a certain country/region, where other <b>IFIs/commercial financiers reached their limit exposure</b>	The Bank has been the first IFI which started to finance Ukrainian clients since the beginning of the Russian invasion in February 2022, and is the only IFI that is ready to finance UHE these days.
<b>Standard-setting: helping projects and clients achieve higher standards</b>	EBRD funding and application of Bank's PPR will ensure wider market outreach, particularly in the current high risk environment.

Client seeks/makes use of EBRD expertise and resources on <b>best international procurement standards</b>	
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#### 1.4 SOUND BANKING - KEY RISKS

Risks	Probability / Effect	Comments
Implementation Risk	High/Medium	(i) There is a risk of delays with implementations [REDACTED]. <b>Mitigants:</b> (i) UHE established a new dedicated project team, including the specialists with experience in the implementation of similar complexity projects with IFIs. [REDACTED].
Energy yield/generation risk	High/Medium	There is a risk, that the energy generation volumes would be affected [REDACTED].
Creditworthiness of the Borrower	High/Medium	While so far, UHE's financial position has been strong, it has deteriorated during 1H 2023. [REDACTED]. <b>Mitigants:</b> As part of the Project, EBRD and Italy will provide EUR 50 million of emergency liquidity support to the Company. [REDACTED]. The risk is also mitigated by the sovereign guarantee of Ukraine and parallel concessional financing from Italy that will cover 50% of debt amount.
Political risk	High/Medium	Russia's war on Ukraine has increased political risks significantly and made the potential future developments of the situation unpredictable. <b>Mitigants:</b> Ukraine continues to ensure critical functions, including utility supplies, on controlled territories, and remains resolved and united in defending its independence, sovereignty and territorial integrity. G7, NATO, the EU, the IMF and Ukraine's other international partners are strongly committed to supporting Ukraine and its people in the face of the Russian aggression, providing fast-track emergency assistance, financial and humanitarian aid.
FX risk	High/Low	A devaluation of the Ukrainian Hryvnia against EUR and USD increases the debt burden on UHE in UAH terms of predominantly hard currency denominated loan portfolio. <b>Mitigants:</b> Under extreme war conditions, so far, the National Bank of Ukraine has skilfully managed the macro-financial stability. After the lifting of fixed UAH/USD exchange rate that was introduced by NBU after the start of the war the exchange rate remained stable. [REDACTED]. This risk is likely to be mitigated by support of developed economies pledging significant financial aid for Ukraine.
Regulatory risk	Medium/Low	[REDACTED].
Macro-economic	High/Medium	According to IMF outlook, the Ukrainian economy shrunk by 30% in 2022 due to the war and its implications. [REDACTED]. <b>Mitigants:</b> This risk is likely to be mitigated by the support of developed economies which are pledging significant financial aid for Ukraine. Several multi-donor accounts are being created in the IMF, World Bank and EU.

[REDACTED]. The Project will help UHE to maintain its operations, enhance the Company's financial stability and will address the immediate Capex needs of the Dnipro HPP and Seredniodnipro HPP, which are critical to maintain the electricity production capacity and stability of the Dnipro river HPPs cascade.

## 2. MEASURING / MONITORING SUCCESS

### Transition Impact Monitoring Indicators

#### *Primary Quality: Resilient*

Obj. No.	FW monitoring indicator	Corresponding SO monitoring indicator	Details	Baseline	Target	Due date
1.1	[See Board Document]	Improved operational performance of the client	EUR 50m will be provided to the Company as a liquidity support. This will help to enhance UHE's financial standing [REDACTED].	[REDACTED]	[REDACTED]	[REDACTED]

#### *Secondary Quality: Green*

Obj. No.	FW monitoring indicator	Corresponding SO monitoring indicator	Details	Baseline	Target	Due date
2.1	[See Board Document]	Renewable energy capacity installed (MW)	As a result of project implementation, the production capacity of 4 hydraulic units will be increased [REDACTED].	[REDACTED]	[REDACTED]	[REDACTED]

#### *Additional Indicators*

Indicator type	Monitoring indicator	Details	Baseline	Target	Due date
Advisory & Policy Indicators	Renewable energy - electricity produced (MWh/year)	Following replacement of 4 hydro aggregates, expected annual electricity generation by those units is expected to grow [REDACTED].	[REDACTED]	[REDACTED]	[REDACTED]
Advisory & Policy Indicators	CO2 emissions avoided (tonnes/year)	The Project implementation will lead to additional reduction of CO2 emissions of 26,000 tons per year.	[REDACTED]	[REDACTED]	[REDACTED]

## 3. KEY PARTIES

### 3.1 BORROWER

UHE, an existing client of the Bank, is a 100% state owned corporatized Company and Ukraine's only large hydropower generation company. Prior to the Russian invasion, UHE

operated nine hydro power plants (7 HPPs and 2 PSPPs) on the Dnipro and the Dniester rivers with a total installed capacity of 6.1 GW, but after the destruction of the Kakhovska HPP by Russian forces in June 2023 total installed capacity under UHE's operation has decreased [REDACTED]. Due to the destruction of the Kakhovska HPP and the reduction in production capacities of other HPPs as a result of the missile attacks, UHE's operating capacity is currently limited [REDACTED].

UHE also provides peaking electricity, frequency and capacity regulation and reliable emergency reserve to the power system of Ukraine. UHE's generating units are a major contributor to the security, stability and quality of the national electricity network. [REDACTED].

### 3.2 GUARANTOR

Since peaking in 2016, the ratio of public and publicly guaranteed debt to GDP has rapidly declined on the back of nominal GDP growth, prudent public finance management and currency appreciation due to large foreign private capital inflows on the domestic government securities market in 2019. It decreased from 79.5 per cent in 2016 to 60.4 per cent in 2018 and further to 50.5 per cent in 2019. The public debt ratio sharply increased to 61.0 per cent in 2020 due to the output decline, depreciation of the currency and increasing financing needs related to the Covid-19 pandemic, before falling back to 49.0 per cent in 2021. Due to the war on Ukraine, public debt ratio reached 81.7 per cent in 2022 mainly due to deep decline of GDP. IMF baseline scenario forecasts that the public debt ratio will rise further to 105.0 per cent of GDP in 2024. However, it also assesses that the Ukraine's public debt is sustainable on a forward-looking basis conditional on the implementation of a debt restructuring and on receiving sufficiently concessional financing during and after the programme period. A G7+ have committed to final debt treatment before the expiry of the Extended Fund Facility arrangement in 2027. [REDACTED].

S&P initially downgraded Ukraine's rating several times to 'RD' and then upgraded to 'CC' in August 2022, following the successful agreement with creditors to freeze debt service until the end of 2023. However, the Fitch's IDR (Issuer Default Rating) of LTFC (Long-Term Foreign Currency) was lowered to 'CCC' with Negative Outlook from 'CCC+' with Stable Outlook in April 2023 due to the foreseeable external debt stress. Moody's also downgraded the Ukraine's LTFC sovereign credit rating from 'B3' with Stable Outlook to 'Caa2' in March 2022 and then readjusted to 'Ca' with Stable Outlook in February 2023. Fitch initially downgraded Ukraine's rating several times to 'RD' and then upgraded to 'CC' in August 2022, following the successful agreement with creditors to freeze debt service until the end of 2023. Fitch's rating has retained since then. The key drivers behind the decision were the impaired Ukraine's debt sustainability and the severe impact that Russia's invasion will have on Ukraine's economic and fiscal strength due to extensive damages to its productive capacity.

## 4. MARKET CONTEXT

The Ukrainian energy sector moved to a liberalized market system on 1 July 2019. The new market replaced the regulated single buyer model, and it consists of: (i) a bilateral contracts market; (ii) a day-ahead market; (iii) an intraday market; (iv) a balancing market; and (v) an ancillary services market.

Despite this liberalization, some administrative interferences in the electricity market functioning are still taking place. In particular, household electricity tariffs are subsidized through a Public Service Obligation (PSO) mechanism operated by the Guaranteed Buyer (GB) that allocates part of low-cost electricity generated by Energoatom and UHE. From 1 October 2021, the PSO model became "financial PSO".

On 30 May 2023 the Cabinet of Ministers of Ukraine introduced changes to the PSO mechanism by increasing fixed prices for household consumers to the level of 2.64 UAH/kWh (60-85% increase compared to prior tariffs). However, the increased tariff for population remains sufficient to cover only the cost of energy transmission and distribution services paid by USSs, responsible for supply of electricity to the households. Whereas the market price of electricity itself, purchased by those USSs, shall be compensated almost in full by UHE and Energoatom in line with their PSO obligations.

UHE's main function on the market is to provide peaking electricity, frequency and capacity regulation and reliable emergency reserve to the power system of Ukraine. UHE's generating units are a major contributor to the stability and quality of the national electricity network.

UHE is operating on the following energy market segments:

- **Market of bilateral agreements.** Roughly 50% of total UHE electricity output is sold on this market segment through electronic auctions. Main counterparty is the Guaranteed Buyer, who purchases electricity, which is then supplied by distribution companies further to the population.
- **Day-ahead and intraday markets.** Electricity sales are conducted on Market operator's platform by means of meeting sale and purchase orders of market participants. Around 25-30% of Company's revenues come from the DAM/intraday electricity sales.
- **Balancing market.** UHE is one of the main players on the balancing electricity market. The main offtaker on the balancing market is Ukrenergo, the transmission system operator of Ukraine, who purchases and sells electricity in order to (i) balance the production and consumption within the system and (ii) regulate electricity imbalances of the parties responsible for balancing. Participation on the balancing market is mandatory for all balancing service providers, including UHE, which have to execute TSO's commands to increase or decrease their load. This market segment accounts for around 15-20% of total Company's revenues.
- **Ancillary services market.** UHE is the main supplier of ancillary services on the market (c. 60% of total 2022 demand was covered by the Company), which include frequency and capacity regulation reserve services provided to the TSO. Ancillary services are sold to the TSO through daily, monthly or yearly auctions on market terms.

In 2021, the share of HPPs and PSPPs in country's total electricity production was 5.8% and 0.8%, respectively. As per UHE's 2022 financial statements, despite the devastating impact of the Russian war on Ukraine started in February 2022, the Company managed to increase its production output during 2022 by 6% due to favorable hydrological conditions related to spring floods. The energy production level was further increased in 1H 2023 due to favorable weather conditions, which allowed to secure high electricity generation volumes despite the destruction of the Kakhovska HPP and dam. [REDACTED].

## **5. FINANCIAL / ECONOMIC 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

Categorised B (ESP 2019) and Low Medium Risk. The loan will provide finance for procurement of critical HPP equipment and emergency liquidity needs for Ukrhydroenergo in order to ensure safe and sustainable electricity generation process, which will have mainly beneficial environmental and social (E&S) impacts. While the Company is an existing client, the Bank has not undertaken a project with the Company for some time, and no new projects were done under the 2019 E&S Policy (ESP). Recent pre-war attempts to undertake projects have not provided sufficient, additional, E&S information and ESD therefore cannot state that current corporate E&S standards are compliant with the Bank's Environmental and Social Policy. Due to the ongoing war and associated security risks, the Bank is unable to undertake meaningful additional environmental and social due diligence on both the project, and on other Company projects which may create reputational issues for the Bank, and ESD will therefore seek a derogation from the ESP. An independent environmental and social audit is required to be undertaken both on the Project, and on corporate Environmental, Social and Governance management systems, within 12 months of martial law lifting in Ukraine.

### 6.2 INTEGRITY

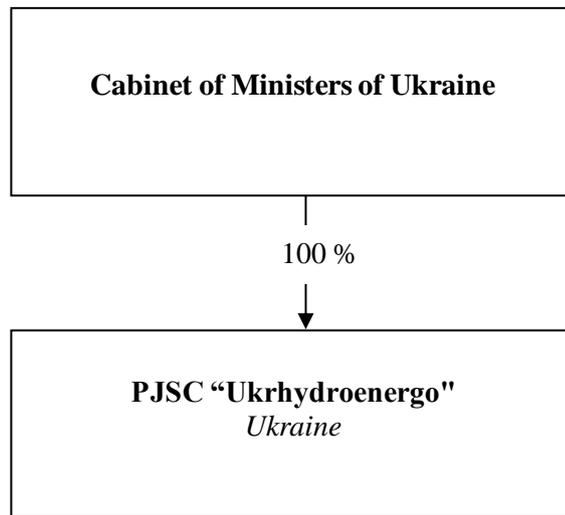
In conjunction with OCCO, updated integrity due diligence was undertaken on the Company, its senior management and other relevant parties [REDACTED].

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	SHAREHOLDING STRUCTURE
ANNEX 2	UKRHYDROENERGO`S HISTORICAL FINANCIAL STATEMENTS
ANNEX 3	GREEN ASSESSMENTS
ANNEX 4	PROJECT IMPLEMENTATION

## ANNEX 1 – SHAREHOLDING STRUCTURE



**ANNEX 2 – UKRHYDROENERGO`S HISTORICAL FINANCIAL  
STATEMENTS**

[REDACTED]

## ANNEX 3 – GREEN ASSESSMENTS

### Introduction

Based on the assignments undertaken, the project is considered aligned with both the mitigation and adaptation goals of the Paris Agreement. The project received a CT score of 2 and the PC score of 2, so no further analysis is required.

The Project delivers climate change mitigation. These improvements result in a GET share of 100% for the project.

### Paris alignment assessment

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

- The project is **included** in the “aligned list”.
- Regarding project activity, there are **no** activities included in the “non-aligned list”.
- Applicable additional or specific conditions associated with the “aligned” project **have** been met.

Therefore, the project is aligned with the Paris Agreement objectives for mitigation (BB1).

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

- Evaluation of the physical climate risk and vulnerability context: the screening of the project indicates that the project faces potentially material climate risks. Specifically:

Hazard	Sensitivity	Exposure
Inc water stress	VERY HIGH	Probable
Drought	VERY HIGH	Plausible
Flood	VERY HIGH	Probable

- Definition of climate resilience measures:  
The materiality of the risks identified under step 1 is assessed as low to moderate:
  - *Water stress and drought*: the results obtained from the screening rely on the output of coarse-resolution global climate models. When assessed relative to relevant peer-reviewed academic studies, conducted by different research institutes, and using tailored approaches and models, the hydroclimatic situation presents itself as follows: Until 2040, water availability and drought occurrence are not projected to change materially on average, with mean annual flow in the relevant river basins expected to match long running means observed during the 1981-2010 reference period. Winter month streams flows are expected to slightly increase, while summer flows are expected to slightly decrease. From 2040, there will be a deviation in mean annual water availability, but not significant compared to the reference period.
  - *Flood*: The Dnipro cascade was brought into existence as a mechanism to control hydrological variability, including flooding. As for the risk flooding poses to the structure itself: based on limited information, the internal assessment concludes that given the cascade structure and given the size of the reservoir, which allows incoming flooding to dissipate and minimises the likelihood of the reservoir overflowing, flood risk is not material.
- Appraisal of broader climate resilience context: Based on the information provided on the potential impacts at the system level in the Green Questionnaire, this project is unlikely to undermine climate resilience of the system in which it operates.

Due to the materiality of the risks identified, the Company should further analyse them during the Environmental and Social Due Diligence (ESDD). The DD should identify the required mitigation measures and detail the action

plan to implement them. This should be carried out within 12 months of martial law lifting. The following specific items should be included:

- Assessment of the sensitivity of electricity generation to the impacts of increased hydrological variability under relevant climate change scenarios.
- If relevant, formulation and implementation of reservoir management measures to better control increased hydrological variability.

Therefore, the project is aligned with the Paris Agreement objectives for adaptation (BB2).

The project has been assessed as **aligned** with the Paris Agreement criteria for mitigation and adaptation.

**GET attribution**

Project GET attribution:

Climate Change Mitigation Category: 1. Energy Sub-category: 1.1 Hydro powered electricity generation GET Share: 100%	Climate Change Adaptation N/A	Other Environmental Activities N/A
<b>Overall GET Share: 100%</b>		

As the project is related to brownfield operations, the GHG emissions savings will be directly proportional to the additional power generated.

This project is considered 100% GET.

Part of the use of proceeds is dedicated to Capex for the replacement of old equipment resulting in net GHG emissions savings of 26,000 tpa. This is considered 100% GET.

The rest of the funds will provide working capital for the Company. The Company only produces renewable energy and the working capital will support this production as will be used to pay for dispatching services, transmission services and balancing costs. This is also considered 100% GET. [REDACTED].

## ANNEX 4 – PROJECT IMPLEMENTATION

### **Procurement classification – *Public sovereign***

[REDACTED]. To ensure due focus on the new Project, the Company established a new dedicated PIU, which will include people with experience in implementing projects of similar complexity. Involvement of an experienced PIU Consultant to assist with Project procurement and implementation will contribute to mitigating the risk related to the Company’s limited capacity.

### *Contracts risk assessment – Moderate High*

[REDACTED]

### **Project implementation arrangements:**

A Project Implementation Unit is established within the Company and will have an overall responsibility for the implementation of the Project. The PIU will be supported by the PIU Consultant, envisaged to be financed from the loan proceeds.

Contracting the PIU Support Consultant shall be the precondition to commencing procurement of Capex components.

### **Procurement arrangements:**

The Project is classified as public sector for procurement purposes. The procurement of Capex items to be financed out of the EBRD loan and Italy Funded Tranche shall be subject to the provisions of the EBRD Procurement Policies and Rules (“PPR”) applicable to public sector operations, and shall be conducted in ECEPP. There is only one Ukrainian manufacturer of power generation units and the current capacity of domestic gantry cranes manufacturers is limited, thus ECEPP would ensure access to wider international market. [REDACTED].

In view of the current situation in Ukraine, to assist in developing a workable and realistic procurement delivery strategy, prior to the commencement of procurement procedures the Company held an online market consultations event, hosted by the Bank, with the industry on 21 July 2023. Despite of low participation, this assisted to determine the most economic and efficient way forward, identify key contractual risks, and establish the minimum timescales required for proposal preparation and for the physical supply of equipment. This analysis enabled UHE and the Bank to finalise the most appropriate procurement procedure(s) to fulfil the objectives of the Project in the shortest possible time whilst maintaining an open and transparent procurement process. [REDACTED].