



RESTRUCTURING PAPER
ON A
PROPOSED PROJECT RESTRUCTURING
OF
IMPROVING POWER SYSTEM RESILIENCE FOR EUROPEAN POWER GRID INTEGRATION
APPROVED ON JUNE 30, 2021
TO
PJSC "UKRHYDROENERGO"

ENERGY & EXTRACTIVES

EUROPE AND CENTRAL ASIA

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ABBREVIATIONS AND ACRONYMS

BESS	Battery Energy Storage System		
CERC	Contingent Emergency Response Component	MoE	Ministry of Energy
CPF	Country Partnership Framework	MoF	Ministry of Finance
CTF	Clean Technology Fund	PDO	Project Development Objectives
ECA	Europe and Central Asia	PIU	Project Implementation Unit
EMS	Energy Management System		
ESCP	Environmental and Social Commitment Plan	POM	Project Operations Manual
ENTSO-E	European association for the cooperation of transmission system operators	SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
GDP	Gross Domestic Product	SEP	Stakeholder Engagement Plan
GHG	Greenhouse Gas	TA	Technical Assistance
GRM	Grievance Redress Mechanism	TSO	Transmission System Operator
		UHE	Ukrhydroenergo
IBRD	International Bank for Reconstruction and Development	UAH	Ukrainian Hryvnia (national currency)
IFC	International Finance Corporation	WB	World Bank
IFI	International Financial Institution		
ISR	Implementation Status and Results Report		



Note to Task Teams: The following sections are system generated and can only be edited online in the Portal.

BASIC DATA

Product Information

Project ID P176114	Financing Instrument Investment Project Financing
Environmental and Social Risk Classification (ESRC) Substantial	
Approval Date 30-Jun-2021	Current Closing Date 31-Dec-2026

Organizations

Borrower PJSC "Ukrhydroenergo"	Responsible Agency
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Project Development Objective (PDO)

Original PDO

To enhance the flexibility of the Ukrainian power grid through storage investments and market expansion to support synchronization with the European electricity grid and decarbonization of power sector.

Summary Status of Financing (US\$, Millions)

Ln/Cr/Tf	Approval	Signing	Effectiveness	Closing	Commitment	Net Disbursed	Undisbursed
IBRD-92840	30-Jun-2021	13-Sep-2021	10-Jun-2022	31-Dec-2026	177.00	.46	176.54
TF-B5724	13-Sep-2021	13-Sep-2021	10-Jun-2022	31-Dec-2026	1.00	0	1.00
TF-B5994	30-Jun-2021	13-Sep-2021	10-Jun-2022	31-Dec-2026	34.00	.16	33.84



Policy Waiver(s)

Does this restructuring trigger the need for any policy waiver(s)?

No

I. PROJECT STATUS AND RATIONALE FOR RESTRUCTURING

1. This restructuring seeks to create a Contingent Emergency Response Component (CERC). There will be no change to the Project Development Objective (PDO) or to the project's closing date. The Client, Ukrhydroenergo (UHE), has requested in its letter dated October 27, 2022, the inclusion of a CERC in the project, which would allow it to sustain operations by protecting and rehabilitating key hydropower infrastructure (mainly hydroelectricity plants and local distribution network) under the Project. This would be the first restructuring of the project.
2. **The Russian invasion on February 24, 2022, has led to a sudden and severe deterioration of the macroeconomic situation in Ukraine.** The ongoing war is imposing severe human costs, causing a growing number of civilian casualties, interrupting livelihoods, and damaging critical infrastructure, including homes, water and sanitation, schools and universities, and health facilities. Millions of people have fled to neighboring countries or been internally displaced: according to the United Nations High Commissioner for Refugees (UNHCR), as of October 18, 2022, more than 7.7 million Ukrainian refugees were registered in Europe.
3. **The war has also heavily affected power sector infrastructure and undermined the sector's financial situation.** Power sector infrastructure has been significantly damaged, particularly since the beginning of October 2022. Critical energy infrastructure facilities became the main target of the Russian massive strikes on the morning of October 10, 2022 and following weeks. The attacks struck several thermal power plants and transmission lines and high voltage substations, leading, among others, to major damages at the largest Hydro Power Plant (HPP) in Ukraine, Dniester HPP. Other plants - including Kyiv HPP, Dniepr HPP, Kremenchug HPP, Serednedniprovska HPP – were partially shut down with overall damages estimated to amount to more than USD 200 million for equipment and repairs. Since the intensification of attacks, electricity supply has been disrupted a majority of regions and blackouts were reported in several areas and cities with scheduled maintenance outages taking place in Kyiv and its region. Sector companies have been carrying out round the clock repairs to reestablish the service. Electricity consumption decreased significantly since the start of the invasion, by 30-35 percent versus the previous year, with the collection rate dropping around 65 percent on average in the first six months of 2022, leading to significant revenue shortfalls for sector operators throughout the value chain (generation, transmission, through distribution). UHE revenues are expected to fall by almost 50 percent during the second half of 2022, resulting in cash outflows of more than UAH3.7 billion during that period.
4. **The Ukraine Improving Power System Resilience for European Power Grid Integration Project focuses on improving resilience of the power system, and enhancing energy security, thus leading to improved quality and efficiency of the electricity supply.** The Project is financed through a US\$177 million IBRD loan, a US\$34 million Clean Technology Fund (CTF) Loan and a US\$ 1 million CTF grant. The Project Development Objective (PDO) is to enhance the flexibility of the Ukrainian power grid through storage investments and market expansion to support synchronization with the European electricity grid and decarbonization of power sector, through two components, implemented by



Ukrhydroenergo (UHE): 1) Installation of Battery Energy Storage System (BESS) with solar PV plants, establishment of an Energy Management System (EMS), and Supervision Consultancy, and 2) Technical Assistance for UHE. The project contributes to outcomes of the current Country Partnership Framework (FY17-21)¹ for Ukraine. Under the “Making Markets Work” pillar, the Project will help strengthen the quality of infrastructure services and create a level playing field for the private sector in storage and ancillary services market. The Project was approved by the Board of Directors of the World Bank on June 30, 2021, and the financing agreements were signed on September 13, 2021². The Project became effective on June 10, 2022.

5. **The Project remains highly relevant and serves the Government’s strategic and development priorities, contributing to the stability and sustainability of the Ukrainian power system.** In the wake of the conflict, Ukraine permanently disconnected from the Russian and Belarus power system and a trial synchronization with ENTSO-E was achieved on March 16, 2022. While the synchronization is considered as a historical achievement, under the trial operation, only limited commercial cross border exchanges are permitted between Ukraine and ENTSO-E and thus the synchronornization is far from full power system and market integrations, which need to be achieved in the short term to support the country’s reconstruction and decarbonization. Investments and Technical Assistance planned under the project remain instrumental in supporting full integration of the Ukrainian power system within the European system, and accompany its decarbonization strategy. In the context of the current conflict, and fluctuating power supply, battery storage could help balance supply and demand, reducing blackouts. Stability of the power system, with adequate energy supply, will also be key to reconstruction efforts and post conflict recovery of the Ukrainian economy.
6. **Implementation status and disbursements.** Progress towards meeting the PDO and overall Implementation progress are rated Satisfactory in the latest Implementation Status and Results Report (ISR) dated October 18, 2022. Only small amounts of disbursements have been made: US\$0.46 million from the IBRD loan and US\$0.16 million from the CTF loan. Retroactive financing has been included under the Loan, but UHE has not utilized it yet. UHE has established a Project Implementation Unit and Financial Management (FM) and disbursement arrangements are in place, including qualified FM staff and robust IT system. UHE submitted draft terms of reference for procurement of consultant for BESS. Given the current uncertainties resulting from the current conflict, the Bank has requested UHE to split the BESS Consultancy assignment into two separate assignments starting with the project preparation service, while selection for supervision and contract management would be launched in a subsequent phase. The draft terms of reference for selection of the Procurement Specialist have been developed along with the draft General Procurement Notice, (GPN) and UHE has been properly registered into STEP. UHE was expected to proceed with GPN publication as well as with the Procurement Plan entries when the conflict broke out. The Project Operations Manual (POM) was adopted in April 2022.

II. DESCRIPTION OF PROPOSED CHANGES

7. The proposed restructuring seeks authorization for the introduction of a new Contingent Emergency Response Component (CERC). There will be no change to the PDO, project closing date, components design, cost and related indicators.

¹ Report No. 114516-UA, discussed at the World Bank Board on June 20, 2017.



8. **Contingent Emergency Response Component (IBRD US\$0 million).** The proposed new CERC seeks to support UHE ensure continuation of service and operation of hydropower plants and Pumped Storage Plants (PSPs), as well as generation and supply of electricity produced by UHE to the grid, if the current emergency situation persists, or that a new unexpected emergency arises, following the procedures governed by paragraph 12, Section III of the Bank Policy, Investment Project Financing (IPF) on Projects in Situations of Urgent Need of Assistance or Capacity Constraints. There is a possibility that the current emergency in Ukraine will continue for some time, requiring further changes to the project design to accommodate urgent interventions. There is also a possibility that, during implementation, a natural disaster, epidemic, or other emergency may occur, which would cause a major adverse economic and/or social impact. In anticipation of such an event, this zero allocation CERC enables UHE to reallocate project funds from the IBRD loan to response efforts in response to an eligible crisis or emergency. To trigger this component, UHE would need to provide a statement of facts justifying the request for activation of the use of the emergency funding. Upon the activation request, some or full of the noncommitted project IBRD loan funds could be reallocated to cover eligible expenditures for emergency response, mainly power sector equipment (needed for urgent repair or replacement as well as equipment procured in prevention of energy shortage) and consultancy services (for repairs and preparation of technical specifications and bidding packages).
9. **CERC Manual.** The project would provide financing for emergency response in line with the agreed Specific CERC Annex to the POM which will apply to this Component, detailing FM, procurement, safeguards, eligible expenditures, and other necessary implementation arrangements. The CERC Manual will include the positive list of activities eligible for financing in case the CERC is activated, based on a preliminary list of activities submitted by UHE, which include, but are not limited to: equipment needed to repair damaged facilities including dams, generators, transformers and substation equipment, transmission lines, and associated distribution networks, consultancy services on emergency situations, safety equipment for UHE staff. The approval of the CERC Manual will be a condition of disbursement under the associated disbursement category.
10. **Safeguards.** The CERC Operations Manual will be aligned with CERC Environmental and Social Management Plan (CERC-ESMP) and Environmental & Social (E&S) documentation for the project that will be developed if the Government chooses to activate the CERC. Currently, the Environmental and Social Standards (ESS) applicable for the Project are 1, 2, 3, 4, 6 and 10. Their relevance will be further assessed with the activation of the CERC component and during update of the associated E&S documentation.
11. **Fiduciary and implementation arrangements.** Fiduciary and procurement arrangements remain the same with UHE in charge of project implementation. However, under CERC component more flexible and streamlined procurement arrangements will be used for emergency procurement. Those selected procurement methods and approaches will be indicated in the CERC- Project Procurement Strategy for Development (PPSD). The available PPSD and the Procurement Plan of the Project will be updated to reflect introduced changes and submitted for Bank's review and clearance. In view of the ongoing war and emergency situation in Ukraine, finalization of the above-mentioned documents will occur in parallel with updates to the POM. Given the current context, expanded procurement implementation support (Hands-on Expanded Implementation Support) could be provided by the Bank to UHE, as described in paragraph 12 of the IPF Policy for situations of urgent need of assistance or capacity constraints.
12. **Risks.** The risks of the proposed project have been reassessed to take into account the impact of the ongoing conflict. Overall project risk has been raised to **High**, to reflect the increased risks on political and governance, macroeconomic, sector strategies and policy, and institutional aspects, stemming from the current situation. It is also expected that the COVID epidemic could worsen in Ukraine, with difficult access to needed care and isolation in case of contamination.



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III. SUMMARY OF CHANGES

	Changed	Not Changed
Components and Cost	✓	
Overall Risk Rating	✓	
Implementing Agency		✓
DDO Status		✓
Project's Development Objectives		✓
Results Framework		✓
Loan Closing Date(s)		✓
Cancellations Proposed		✓
Reallocation between Disbursement Categories		✓
Disbursements Arrangements		✓
Disbursement Estimates		✓
Legal Covenants		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Implementation Schedule		✓
Other Change(s)		✓
Economic and Financial Analysis		✓
Technical Analysis		✓
Social Analysis		✓
Environmental Analysis		✓



IV. DETAILED CHANGE(S)

COMPONENTS

Current Component Name	Current Cost (US\$M)	Action	Proposed Component Name	Proposed Cost (US\$M)
Installation of Battery Energy Storage System (BESS) with solar Photovoltaic (PV) plants, establishment of an Energy Management System (EMS), and Supervision Consultancy	249.00	No Change	Installation of Battery Energy Storage System (BESS) with solar Photovoltaic (PV) plants, establishment of an Energy Management System (EMS), and Supervision Consultancy	249.00
Technical Assistance for UHE	1.00	No Change	Technical Assistance for UHE	1.00
	0.00	New	Contingent Emergency Response Component (CERC)	0.00
TOTAL	250.00			250.00

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating at Approval	Current Rating
Political and Governance	● Substantial	● High
Macroeconomic	● Moderate	● High
Sector Strategies and Policies	● Substantial	● High
Technical Design of Project or Program	● Moderate	● High
Institutional Capacity for Implementation and Sustainability	● Substantial	● High
Fiduciary	● Substantial	● Substantial
Environment and Social	● Substantial	● Substantial
Stakeholders	● Substantial	● Substantial
Other	● Moderate	● Substantial
Overall	● Substantial	● High

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The World Bank

Improving Power System Resilience for European Power Grid Integration (P176114)

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