DOCUMENT OF THE EUROPEAN BANK
FOR RECONSTRUCTION AND DEVELOPMENT

Approved on a no-objection basis by the Board of Directors on 21 November 2023[1]

KYRGYZ REPUBLIC

ELECTRICITY SUPPLY DIGITALIZATION PROJECT

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

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

1 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

CAPS	Central Asian Power System
CHP	Combined Heat and Power
DD	Due Diligence
E&S	Environmental and Social
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortization
EBIT	Earnings Before Interest and Tax
ESAP	Environmental and Social Action Plan
ESDD	Environmental and Social Due Diligence
ESMS	E&S Risk Management Systems
EUR	Euro
FX	Foreign Exchange
GDP	Gross Domestic Product
HPP	Hydropower Plant
IFI	International financial institution
IFRS	International Financial Reporting Standards
KR	Kyrgyz Republic
LCY	Local Currency
MDB	Multilateral Development Bank
MoF	Ministry of Finance
MoU	Memorandum of Understanding
NEHC	National Energy Holding Company
O&M	Operation and Maintenance
PIA	Project Implementation Advisor
PIU	Project Implementation Unit
PP&R	Procurement Policies and Rules
SSF	EBRD Shareholder Special Fund
SIF	Sustainable Infrastructure Fund
TC	Technical Cooperation
TCO_{2e}	Tonnes of Carbon Dioxide Equivalent
USD	US Dollar

CURRENCY EQUIVALENTS

EUR / KGS (Soms)	94.17 as at 01.11.2023
USD / KGS (Soms)	88.92 as at 01.11.2023

MEASURES

GW	Gigawatt
kV	Kilovolt
kWh	Kilowatt-hour
MW	Megawatt
TWh	Terawatt-hour
GJ	GigaJoule

PRESIDENT'S RECOMMENDATION

This recommendation and the attached Report concerning an operation in favour of the Kyrgyz Republic (the "Borrower"), are submitted for consideration by the Board of Directors.

The facility will consist of a sovereign loan to the Borrower in the amount of up to EUR 9.2 million. The loan will be on-lent to the National Electric Grid of the Kyrgyz Republic OJSC (the "Company"), majority state-owned electricity transmission and distribution company, which will be the project implementation entity. The loan is proposed to be co-financed by an investment grant of EUR 5.0 million from the EBRD Shareholder Special Fund ("SSF") Work Plan 2023 - 2024.

The operation will enable the Company to finance installation of an advanced metering system with remote disconnections and reading capabilities. The Project also includes procurement of materials for modernisation of the Company's low voltage power infrastructure aimed at reduction of technical and commercial losses leading to the enhanced security of energy supply and estimated carbon emission reduction of 17,191 tonnes of CO_2 a year. The expected transition impact of the project is through the Green quality, which is supported by losses and emission reduction targets. The Project GET share is 100%.

Pre-signing project preparation TC support was funded by the Sustainable Infrastructure Fund ("SIF"). Post-signing project implementation TC support is expected to be funded by an international donor or SIF.

I am satisfied that the operation is consistent with the Bank's Energy Sector Strategy, the Green Economy Transition Approach as well as the Strategy for the Kyrgyz Republic and with the Agreement Establishing the Bank.

I recommend that the Board approve, on a no-objection basis, the proposed loan and SSF investment grant from Work Plan 2023 – 2024, substantially on the terms of the attached Report.

Odile Renaud-Basso

BOARD DECISION SHEET

KYRGYZ REPUBLIC – ELECTRICITY SUPPLY DIGITALIZATION PROJECT– DTM 54885	
Transaction / Board Decision	Board approval[2] is sought for a sovereign loan of up to EUR 9.2 million and an investment grant from EBRD Shareholder Special Fund ("SSF") Work Plan 2023-2024 in the amount of up to EUR 5 million in favour of the Kyrgyz Republic (the "KR" or the "Borrower"). The proceeds of the Loan will be used to finance the procurement of (i) household smart electricity meters and related software in the Osh, Jalal-Abad, Tupe and Chuy regions of Kyrgyz Republic and (ii) materials for rehabilitation of low voltage 0,4 kV distribution lines in the country.
Client	The facility consists of a sovereign loan to the Kyrgyz Republic. The Project will be implemented by National Electric Grid of Kyrgyz Republic OJSC (the "Project Entity" or the "Company" or the "NEGK"), electricity transmission and distribution systems operator, who owns and operates more than 10,000 km of power transmission lines of 110 kV and higher, as well as 190 substations with primary voltages of 500, 220 or 110 kV, in the Kyrgyz Republic. The Company is 98% owned by the state while 2% is owned by private minority shareholders. NEGK transports around 12 TWh of energy on an annual basis.
Main Elements of the Proposal	<u>Transition impact</u> • *Primary Quality* – Green (Direct Track). The Bank will finance procurement of household smart electricity meters, related software and materials required for rehabilitation of low voltage distribution lines in the Kyrgyz Republic. The Project is expected to improve reliability, service quality, demand side management and facilitate integration of consumers in to the distribution system. As the result of the project implementation c.63MM kWh of electricity losses are expected to be reduced on an annual basis, which corresponds to 17,191 tons of CO2/year emission savings. The Project is in line with EBRD's Green Economy Transition (GET) Approach and will deliver climate mitigation benefits through installation of smart metering. <u>Additionality</u> • *Financing structure:* The Bank provides long-term financing which is not available from local commercial banks (tenor, grace). • *Standard-setting*: The Bank will support the Project Entity in achieving higher standards that are above the current practice in the country through its conditionalities (e.g. PP&R and ESAP). The Project Entity will benefit from EBRD's expertise in international procurement standards. <u>Sound banking</u> • The financing is structured as a sovereign loan to the Kyrgyz Republic.
Key Risks	*Sovereign risk.* Sovereign debt to GDP stood at 48% as of June 2023 and substantial part of the sovereign debt is concessional. Although the COVID-19 combined with the markets turbulence following the conflict in Ukraine had a negative impact on the country's economy, the KR GDP is expected to grow by 7% in 2024 and by 5.5% in 2025 on the back of increased real wage growth and strong labour market, leading to a strong domestic consumer demand. The sovereign debt of the Kyrgyz Republic is expected to remain manageable in the medium and long term. *Implementation and project completion risk*: the Company has experience implementing similar projects under EBRD's PP&R (Vostokelectro Rehabilitation Project, Oshelectro Rehabilitation Project and will be supported by the Project Implementation Support consultant.
Strategic Fit Summary	The Project is in line with the Bank's Energy Sector Strategy, the Green Economy Transition Approach as well as the Strategy for the Kyrgyz Republic and with the Agreement Establishing the Bank.

[2] Article 27 of the AEB provides the basis for this decision.

ADDITIONAL SUMMARY TERMS FACTSHEET

EBRD Transaction	Up to EUR 9.2 million sovereign loan to the Kyrgyz Republic (the "Borrower"), to be co-financed by a capital grant from the EBRD Shareholder Special Fund (the "SSF") Work Plan 2023 - 2024 in the amount of up to EUR 5 million (or its equivalent in USD).
Existing Exposure	Sovereign exposure to the Kyrgyz Republic (*Moody's B3/Negative*): EUR 127 million as of 1 November 2023. Combined exposure to the Project Entity, OJSC National Electric Grid of the Kyrgyz Republic: EUR 6.041 MM through the following two projects: • Oshelectro Rehabilitation Project – EUR 2.685 MM; • Vostokelectro Rehabilitation Project – EUR 3.356 MM.
Maturity / Exit / Repayment	The proposed loan tenor is up to 18 years [REDACTED].
Potential AMI eligible financing	None.
Use of Proceeds	The proceeds of the Bank's investment will be used for financing the procurement of (i) household smart electricity meters and related software in the Osh, Jalal-Abad, Tupe and Chuy regions of Kyrgyz Republic and (ii) materials for rehabilitation of low voltage distribution lines in the country.
Investment Plan	[REDACTED]
Financing Plan	[REDACTED]
Key Parties Involved	Kyrgyz Republic represented by the Ministry of Finance (the "Borrower"). OJSC National Electric Grid of Kyrgyz Republic (the "Project Entity", the "Company").
Conditions to subscription / disbursement	Conditions to disbursement: -Execution of the Loan Agreement, Project Agreement, Subsidiary Loan Agreement; -The Project Implementation Unit shall have been established at the Company [REDACTED]; -Procurement consultant is appointed; -The SSF grant funding has been approved by the Bank; -Other standard EBRD conditions.
Key Covenants	For the Project Entity: -Environmental and social compliance; -Compliance with the Bank's Procurement Policies and Rules; No financial covenants on the Project Entity.
Security / Guarantees	Sovereign loan
Other material agreements	Project agreement with OJSC National Electric Grid Company.
Associated Donor Funded TC and co-investment grants/concessional finance	**A. Technical Cooperation (TC)** <u>Pre-signing</u>

	TC1: Environmental and Social Due Diligence: The cost of the assignment amounted to EUR 14,525 and was financed by the EBRD Sustainable Infrastructure Fund ("SIF"). Post-signing **TC2: ESMS Capacity Building and Implementation Support:** This assignment is to provide individualised capacity building and monitoring support to the client to ensure that project implementation in line with the requirements of the Environmental and Social Policy (ESP). Training and guidance on ESAP implementation will be provided and E&S reporting obligations will also be supported. The team will seek funding under Delegated Authority Programme #2010 Cross Sectoral Supplementary Environmental and Social Due Diligence and Monitoring Programme. The estimated cost of this assignment is EUR 30,000 proposed to be financed by the Sustainable Infrastructure Fund ("SIF"). **TC3: Project Implementation Support:** This technical cooperation will aim to provide the following services to the Company: (i) assistance with procurement of the goods under the Project including development of tender documentation, tenders evaluation and contracting, (ii) assistance with the enhancement of the PIU; (iii) assistance with the supervision of goods contracts' implementation; and (iv) environmental and social implementation support and assistance with compliance and reporting obligations under the financing documents. Total estimated cost of the assignment is up to EUR 400,000 and it is proposed to be financed by an international donor, SIF and/or the SSF. **Reimbursement:** The assignments above will not be reimbursable. **Cost-sharing:** No financial contribution is expected from the Company due to the affordability constraints. In line with the Bank's cost-sharing policy dated 1 January 2021, financial contributions will not be provided taking into account Company's public utility status and no pass-through of such contribution in the regulated tariff. The Company will be providing in-kind contribution (office space, local transportation etc.). **B. Co-investment grants / Concessional Finance (Non-TC)** The Project is expected to be co-financed by a EUR 5 million investment grant from the SSF Work Plan 2023 - 2024.

[REDACTED]

INVESTMENT PROPOSAL SUMMARY

1. STRATEGIC FIT AND KEY ISSUES

1.1 Strategic Context

Kyrgyz Republic's hydro-rich energy sector is characterised by the ageing infrastructure and significant losses, which are exacerbated by a combination of climate shocks (draughts, severe winter conditions etc.) and growing demand. The sector has been suffering from years of underinvestment, deterioration of the financial situation and lack of cost-reflective tariffs. The country has an energy deficit driven by insufficient generation, especially in winter, when demand is 2.5-3 times higher than in summer. About half of generation capacity and up to 70% of distribution assets are beyond their useful lives, leading to frequent supply disruptions due to equipment failures and overloading across the country. The system's technical and commercial losses stand at 13.01 % which is significantly higher than the global average of 6.5% of transported volumes, which varies between 2.5% to 10% depending on the distribution system network size and its technical maturity. These challenges pose a significant threat to the country's energy security, and make it particularly vulnerable to the impacts of climate change. At the same time, the power sector of Kyrgyz Republic accounts for about 4% of the country's GDP and 16% of industrial production and has significant growth potential.

The proposed transaction builds on the Bank's previous engagement and targets procurement of smart meters to other regions of the country and of materials required for rehabilitation of approximately 200 kilometers of low voltage distribution lines in the Osh, Jalal-Abad, Tupe and Chuy regions of the Kyrgyz Republic. The Project is envisioned to reduce technical and commercial losses in the grid, as well as to increase physical resilience of the distribution network through the use of weather-resistant and insulated aerial bundle cables.

The Project is in alignment with the Kyrgyz government's objective to promote climate mitigation activities as reflected in its updated Nationally Determined Contributions (NDC) for 2021, where the government has set a mitigation goal to reduce greenhouse gas emissions by 43.62 % by 2030.

The Project is part of the Kyrgyz Government's broad strategic plan to digitalize the distribution system by supplying 1.58 million smart meters to all households and eligible entities as outlined in the "Development Strategy of NEGK until Year 2028" and "National Development Strategy of Kyrgyz Republic for Years 2018-2040". The strategic plan aims to rehabilitate distribution lines by replacing outdated overhead lines to aerial bundled cables as well as strengthening substations to reduce peak-hour overloading and extensive technical losses stemming from it. The proposed investment programme constitutes a key building block for the development of the smart grid infrastructure throughout the distribution network. Strong distribution network is also one of the major pre-requisites for development of renewable energy projects in the country.
The Bank's proposed loan complements the financing provided by the World Bank in the amount of USD 50 million in 2022 to the Project Entity, which has similar use of proceeds of installation of smart metering, supply of transformers, procurement of SCADA systems and other technical equipment. On the broader context the Bank and other IFIs have been encouraging the Kyrgyz government to address the long-lasting challenges in the energy sector.

To support the Government with priority reforms in the energy sector, in January 2022 the Bank signed a memorandum of understanding ("MoU") with the Kyrgyz Ministry of Energy

for the purpose of fostering the development of renewable energy including modernization of energy infrastructure.
The Bank continues to engage with the Government of Kyrgyz Republic over the priority tariff reforms. With electricity tariff for population at c.1.1 EURc/kWh, one of the lowest in the world, the sector is financially not sustainable. According to the World Bank estimations, without a change in tariffs, the deficit in the electricity sector is forecasted to increase 12-fold in the next five years.

The Project is expected to be co-financed by an investment grant from the SSF for up to EUR 5 million. The grant component will help strengthen the country's energy sector by digitalizing and integrating consumers into electricity distribution system. As the country has limited debt capacity, mobilising concessional finance following the guidelines of the IMF is essential to ensure affordability while the necessary investments take place. In accordance with the current IMF programme, the Kyrgyz Republic needs to refrain from contracting or guaranteeing non-concessional debt. The proposed Project is in line with the Bank's Strategy for Kyrgyz Republic, Energy Sector Strategy 2019-2023, and supports the Bank's Green Economy Transition Approach.

1.2 Transition Impact

The table below sets out the TI Objectives and details of the project. The relevant Monitoring Indicators and timing for their delivery are presented in Section 2.

Primary Quality: Green (GET Direct Track)

Obj. No.	Objective	Details
1.1	*The percentage of EBRD use of proceeds that supports a green economy transition and therefore qualifies as GET finance exceeds 50%.*	The share of GET-compliant EBRD proceeds is 100%. The Project will contribute to reduction in the electricity losses estimated in the amount of 63 MM kWh/year, translating into reduction of GHG emissions in the amount 17,191 tons/year.

Delivery Risks: The risks are moderate to high. One of the main risks is associated with the Project implementation, which will be mitigated by a Project Implementation Support consultant for procurement and supervision of civil works.

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 (**repeat transaction**).	The Bank previously provided sovereign loans to Kyrgyz Republic that were on-lent to JSC Oshelectro and JSC Vostokelectro, two distribution companies existing as separate entities until September 2022, and now part of OJSC NEGK after distribution sector reorganization

	aimed at increasing corporate efficiencies. The use of proceeds of provided loans was increasing energy efficiency and reducing network losses through smart metering procurement. The Project will further enable the Bank to strengthen its involvement in the country's energy transition efforts, through supplying smart meters to regions, not covered by other projects undertaken by OJSC NEGK with other IFIs and providing materials for rehabilitation of low voltage distribution lines in the country.
Additionality sources	**Evidence of additionality sources**
Financing Structure - EBRD offers a **tenor**, which is above the market average and is necessary to structure the project.	The Bank will provide a loan with a 18-year tenor, [REDACTED], which is not currently available from commercial banks in the local market.
Standard-setting: helping projects and clients achieve higher standards Client seeks/makes use of EBRD expertise on **best international procurement standards**.	EBRD is providing the Project Implementation Support that ensures the use of international procurement standards and is also designed to strengthen the Company's procurement capacity. The Bank's conditionalities such as applying EBRD PP&R and implementation of ESAP will help develop the Company's capacity and allow for the Project's efficient implementation.

1.4 Sound Banking - Key Risks

Risks	Probability / Effect	Comments
Sovereign risk	Low / High	Kyrgyzstan has borrowed increasingly from bilateral creditors to address the most critical bottlenecks in infrastructure sector. The country remains vulnerable to risks arising from inflationary pressures, international commodity price volatility and fiscal policy. According to IMF, the general government deficit, including lending to energy sector SOEs, is estimated to widen to 5.2 % of GDP from 0.8 % in 2021 and remain slightly under 5 % of GDP in the medium term. Most of KR's debt remains external, but the country was able to defer and write-off some of its debt as part of the Debt Service Suspension Initiative ("DSSI"). In early September 2021, KR's Ministry of Finance signed a Memorandum of Understanding with the Paris Club deferring payments of USD 56.6 million to China (USD 51.1 million) and other bilateral creditors (France, Germany, Turkey, Saudi Arabia and Japan). Under the

		DSSI conditions, all deferred payments are transferred to subsequent years in equal shares, with a period of 6 years, of which the first year is preferential. In addition to this, in October 2021, the IMF extended Debt Service Relief for 24 eligible low-income countries, including KR. In particular, IMF wrote off USD 12.6 million in KR's eligible debt falling due in the period through January 10, 2022. At the same time, since early 2022, KR's gross international reserves have shrunk by 12.7 %, from USD 2,977.6 million in December 2021 to USD 2,623.8 million in December 2022. Gross international reserves declined further to USD 2,537.21 million in August 2023. Overall, IMF estimates Kyrgyzstan's public debt to GDP ratio to remain under 60 % through 2028. The risk of debt distress is expected to remain moderate. *Mitigating factors*: sovereign debt was 68.1% of GDP in 2020, which is considered unsustainable, however, robust fiscal stance in 2021 helped to significantly reduce the burden of sovereign debt to 47.9% in June 2023, outperforming the IMF estimates. In accordance with the IMF recommendations, the major part of sovereign debt for Kyrgyzstan was raised on a concessional basis. [REDACTED].
Implementation and procurement risk	Medium / Medium	Project implementation may incur cost overruns and/or completion delays. *Mitigating factors*: the company has experience implementing EBRD financed projects. A standalone PIU will be established to coordinate, manage, monitor and evaluate all aspects of the Project. An international consultant will assist with the Project's implementation. Application of the EBRD's PP&R should ensure that an experienced and creditworthy contractor is selected to perform the work and that a balanced construction contract is signed between the parties. Engineering supervision will further mitigate implementation risks. Procurement Implementation and Procurement Plan is presented in **Annex 1.**
The Company's creditworthiness as first source of repayment	Medium / Medium	Creditworthiness of the Company depends on the tariff increases. Financial projections prepared for the Project suggest that under the proposed tariff methodology and supported by the Bank's investment into efficiency improvement the Company should be able to strengthen its profitability to ensure service of its debt obligations. The Project will help the Company to reduce technical and commercial losses in four regions of its operation. Ultimately the loan repayment is protected by the sovereign nature of the loan.

		Mitigating factors: the World Bank and the Bank are supporting the Government with tariff reforms and sector development to help enhance the financial viability and improve transparency and accountability in the power sector. The most recent positive development was end-users tariff increase effective from May 1st, 2023. This will strengthen the Project's feasibility as NEGK's profitability is growing to fund its capital expenditures program. The loan is ultimately backed by the sovereign. The Kyrgyz Government's decree obliging the Ministry of Finance to inject equity into OJSC NEGK in predetermined amounts in exchange for 33% ownership of the Company provide additional comfort that operational revenues of OJSC NEGK will be directed towards repayment of the debt service obligations undertaken by the Borrower after 2022 (detailed information provided in section 5.2).
Currency Risk	Medium / High	The loan currency is denominated in EUR, whereas the Company revenues are in Kyrgyz som. Devaluation in local currency may have an adverse impact on the Company's debt service ability. *Mitigating factors*: the regulatory reforms with cost-reflective tariffs would allow the Company to increase the tariffs in line with inflation which would partially cover the currency devaluation risk.
Political and governance risk	Medium / High	[REDACTED]. Energy sector is particularly prone to the risk due to the ongoing restructuring and consolidation, which as reported by the World Bank, if poorly implemented, can increase the risk and threaten sustainability of the energy reforms. *Mitigating factors:* the 2021 parliamentary elections were peaceful with no indication of public dissatisfaction, the government has also taken measures to mitigate these risks including by preparation of information outreach and communication campaigns. International organizations such as World Bank continuously engage with the authorities to provide policy dialogue and advisory support.

2. MEASURING / MONITORING SUCCESS

Overall objectives of project	Monitoring benchmarks	Implementation timin
Timely implementation of the Project	Completion according to the timeline and within the budget	[REDACTED]
Maintaining appropriate environmental standards	Successful and timely implementation of the ESAP	[REDACTED]

Primary Quality: Green

Obj. No.	Monitoring indicator	Details	Baseline	Target	Due date
1.1	New or updated GET technology or product leading to energy efficiency introduced	Smart Meters Installed. The number of total installations increases from 350,000 (baseline) by 150,000 by the end of year 4.	350,000 smart meters installed as of 2023.	Additional 150,000	[REDACTED]
1.2	Primary energy saved (GJ/year)	Electricity losses reduced in light of the Project. Losses level is 13.01% as the baseline indicator, and anticipated reduction is 3% - target of 175 GWh (equivalent to 230,400 GJ/year).	0	230,400 GJ / year	[REDACTED]
1.3	CO_2e emissions savings (tonnes/year)	17,191 tons of CO_2 emission savings on an annual basis after project implementation.	0	17,191 CO_2 tonnes / year	[REDACTED]

3. KEY PARTIES

3.1 BORROWER

The EBRD will extend a sovereign loan to the Kyrgyz Republic (B3/Negative by Moody's). The emergence of the global coronavirus pandemic has disrupted the KR's economic trajectory (average real GDP growth of 4.5% over the last decade), with real GDP contracting by 8% in 2020. Sovereign debt that had been declining since 2015, but increased to 74.3% of the GDP during 2020, due to additional external financing and depreciation of the Kyrgyz som. The indicator reduced to 47.9% of GDP by June 2023. The country's economy has rebounded with 3.6% GDP growth in 2021 and 7% in 2022. Inflation constituted 14.7% in 2022. For H1 2023, the economic growth in the Kyrgyz Republic reached 3.9%.

KR's risk of debt distress is expected to remain "moderate" as its sovereign debt is largely made up of long-term concessional loans and is backed by adequate FX reserves (at USD 1.1 billion as of September 2023).

3.2 PROJECT ENTITY

The Project will be implemented by National Electric Grid of Kyrgyz Republic OJSC (the "Project Entity" or the "Company" or the "NEGK"), transmission and distribution systems operator, that owns and operates more than 10,000 km of power transmission lines of 110 kV and higher, as well as 190 substations with primary voltages of 500, 220 or 110 kV. The Company is 98% owned by the state (60% by OJSC National Energy Holding, 33% by the Ministry of Finance of Kyrgyz Republic and 5% by Social Fund of Kyrgyz Republic). The remaining 2% was awarded to private shareholders during partial privatization of the Project Entity in 1990s. NEGK has been the Bank's client since 2016 through Oshelectro Rehabilitation Project (BDS15-147 (Rev 1)), and Vostokelectro Rehabilitation Project (BDS17-129).

NEGK brings wholesale electricity to Kyrgyz energy distribution companies, large industrial consumers as well as to the neighbouring countries - Kazakhstan, Uzbekistan, and Tajikistan.

In 2022, OJSC NEGK sold 11.3 TWh of electricity to the following groups of customers: residential (62%), industry (12%), state organizations (8%), agricultural (2%) and others (16%). The electricity losses in the transmission and distribution grid constituted 13.01% as of 2022 and are expected to be reduced as part of the distribution line rehabilitation efforts and smart metering procurement and subsequent installation.

4. MARKET CONTEXT

The Kyrgyz power sector was restructured in 2002, when the national utility was unbundled into generation, transmission and distribution divisions. State-owned JSC Electric Power Plants is the largest electricity generator, and OJSC NEGK is the majority state-owned transmission system operator (TSO) that also operates the national dispatch service. As the result of further reforms in the energy sector, all four local distribution companies were merged with NEGK in 2022 in order to save costs, improve corporate efficiency through consolidation.

More than 80% of electricity generation in the country relies on the hydropower. As of 2022, JSC "Electric Power Plants" operates 7 HPP and 2 CHP with the total installed electricity capacity of c. 3.9GW, which generates 98% of total electricity in the country. OJSC "National Electric Grid of the Kyrgyz Republic" is responsible for electricity transmission through high voltage lines (110kV-500kV) and for distribution to final customers in the regions of their operations. All state owned power assets are combined under the National Energy Holding Company (NEHC) whereas operational management is delegated to the companies' level. The National Energy Holding Company is designed to govern subsidiary energy SOEs by unified decision making based on the government's energy sector strategy.

The Kyrgyz energy system faces 3-5% growth in demand annually. Electricity generation fluctuates between 13 TWh and 15 TWh depending on the inflow of water and the amount of water accumulated in the Toktogul reservoir (which feeds the Toktogul HPP cascade with capacity of 2.9 GW, representing 75% of total installed capacity in the country). Kyrgyzstan has traditionally been a net exporter of electricity, but export has diminished in the last decade due to increased domestic demand with the country becoming a net importer.

The energy system of the Kyrgyz Republic is divided into northern (60% of electricity consumption, 20% hydropower capacity) and southern (40% of electricity consumption, 80% of hydropower capacity) parts, which are connected by a 500 kV line Toktogul-HPP

Frunzenskaya and a 500 kV line Datka-Kemin, as well as through the Central Asia Power System ("CAPS"). Total depreciation of the JSC National Grid's equipment is 36% for high voltage lines of 110-220-500 kV and 69% for substations of 110-220-500 kV, demonstrating chronic underinvestment in the past decades.

Electricity tariffs to end-users are set by the regulator based on the Mid-Term Tariff Policy (MTTP) approved by the government. The recent amendment to the 2021-25 MTTP that has been effective since May 1st, 2023 introduced tariff increases for population by 30% (from 0.77 KGS/kWh or USDc 0.9/kWh to 1 KGS/kWh or USDc 1.1/kWh) and by different levels for businesses. In terms of purchase tariffs, NEGK pays 0.645 KGS/kWh or USDc 0.7/kWh to JSC "Electric Power Plants".

The Government's primary focus is on modernizing the electricity grid, diversifying energy sources including via integration of utility scale renewable energy (sun, wind) and increasing domestic production, mainly from hydropower, given that the potential of Kyrgyzstan's rivers is approximately ten times what is currently utilised.

5. FINANCIAL / ECONOMIC ANALYSIS

5.1 SOVEREIGN ASSESSMENT

The macroeconomic profile of Kyrgyz Republic (B3 negative by Moody's) is underpinned by the economy's solid growth potential and financial and technical assistance of development partners, which keep debt servicing costs low and external vulnerability contained.

As of June 2023, KR's public debt stood at US$ 5.7 billion, around 80% of which (US$ 4.49 billion) is external. Bilateral concessional lending accounts for 48.4% of external public debt, much of which is held by the Export-Import Bank of China; multilateral concessional loans account for 50.4%. The external public debt has declined from 49.2% of GDP in 2021 to 41.7% of GDP in 2022 (47.9% in June 2023). At the same time, according to IMF's Debt Sustainability Analysis, total public debt is supposed to remain under 60 % of GDP through 2028, implying a medium risk of debt distress.

Inflationary pressures have receded. Annual consumer price inflation peaked at 16.2 % in February 2023, but slowed thereafter to 9.6 % in September 2023. Having ratcheted up the policy rate to 14 % in March 2022, the National Bank of the Kyrgyz Republic reduced it by 100 basis points to 13 % in November 2022, but has left it unchanged ever since (as of end September 2023). The Kyrgyz som has been relatively stable against the US dollar since early 2023.

Tax reforms and a dramatic increase in trade activity have boosted fiscal performance. In January-July 2023, budget revenues increased 32.7 % year on year. Sales tax receipts grew nearly threefold, driven mainly by improvements in tax administration, while significant gains were recorded in receipts from all tax and non-tax revenue sources. Expenditures soared as well (up 30.6 %), but the budget recorded a small surplus of about 1.2 % of GDP.

While shrinking in January-April 2023, Kyrgyz Republic's international reserves has been trending upward in recent months and amounted to US$ 2.56 billion in September (up 13.1% since April 2023).

The share of general government debt to GDP dropped from 56.2 % in 2021 to 49.2 % in 2022 (48 % as of June 2023), mostly thanks to strong economic growth. IMF assesses the overall risk of debt distress as moderate and projects public debt to GDP ratio to decline, reaching 47.9 % by 2028. While most of the government debt is FX-denominated, the high share of concessional debt (98 % of external debt) help mitigate foreign currency risks. According to the IMF debt sustainability assessment (2022), "debt-carrying capacity is assessed as strong, but fiscal space to absorb shocks is narrowing after the substantial public wage increase in 2022".

5.2 FINANCIAL ANALYSIS OF THE PROJECT ENTITY

[REDACTED]

5.3 PROJECTED PROFITABILITY FOR THE BANK

[REDACTED]

6. OTHER KEY CONSIDERATIONS

6.1 ENVIRONMENT

Categorised B (2019 ESP) as the environmental and social issues associated with the installation of household smart electricity meters and replacement of 200km low-voltage 0.4 kV distribution lines and modernization of existing distribution networks are site-specific and localized and can be readily assessed and mitigated. The Bank's Environmental and Social Due Diligence (ESDD) has been carried out by an independent consultant and included a documentations review, a site visit and, a review of the Client's current operations and the proposed Project. An Environmental and Social Action Plan (ESAP) will be developed, incorporating actions to ensure the Project is structured to comply with the Performance Requirements (PRs) and best industry practice.

The results of the ESDD have confirmed that the National Electric Grid of Kyrgyz Republic which has responsibility for the installation of smart meters and rehabilitation of low voltage lines has limited organisational capacity and does not have an environmental and social management system (ESMS) in place. Organisational capacity will need to be enhanced and an ESMS developed and implemented in accordance with PR1.

Key issues from the ESDD relate to environmental and social management systems, pollution prevention, health and safety and, labour and working conditions. Safety risks are managed in accordance with national legislation however, measures will be required to improve health standards and hygienic working conditions. A Health and Safety Action Plan will be developed to address the Company's operational risks such as: hazardous waste management, the provision of appropriate occupational equipment, hygienic workplace facilities for both men and women and, hazard awareness raising and training. The Human Resources Policy in place will require improvements regarding working relationships and an employee grievance mechanism will be established. The ESAP under development will include these mitigation measures and will be agreed prior to board consideration.

The project will not need to acquire any additional land or result in land use changes or economic displacement as the smart meters will be installed in existing houses and low-voltage lines are being rehabilitated rather than constructed on new routes. In addition, these locations are not expected to have material impacts on biodiversity or cultural heritage sites as they are not near to sensitive areas such as Important Bird Areas, Ramsar Sites and World Heritage Sites.

Project-specific disclosures documentation includes a Non-technical Summary ("NTS") and Stakeholder Engagement Plan ("SEP"). A public grievance mechanism will be established and the Company will make effort to engage with recently constructed houses in order for them to share project benefits. The Company will receive additional technical cooperation assistance and capacity building to implement the ESAP including development of a robust E&S management system that will allow in future for sustainability reporting as well as management of E&S risks and E&S related grievances. As part of the system the Company will develop a low carbon pathway. EBRD will monitor the Project through review of annual environmental and social reports and site visits if required.

6.2 INTEGRITY

In conjunction with OCCO, integrity due diligence was carried out on NEGK, its shareholders, their senior personnel, 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.

6.3 CONCESSIONAL FINANCE

The Project is expected to be co-financed by investment grant from the SSF for up to EUR 5 million. The grant component will help strengthen the country's energy sector by digitalizing and integrating consumers into electricity distribution system. As the country has limited debt capacity, mobilising concessional finance following the guidelines of the IMF is essential to ensure necessary investments take place. In accordance with the current IMF programme, the Kyrgyz Republic needs to refrain from contracting or guaranteeing non-concessional debt.

There is no commercial debt available in KR to finance long-term infrastructure projects requiring similarly long-term tenor financing.

The grant partially alleviates pressure on the household tariff as investment grant related components are not envisioned to be included in the tariff calculation. Avoiding passing of the higher tariff on population would have direct impact supporting affordability for the citizens and industries in Osh, Jalal-Abad, Tupe and Chuy regions.

ANNEXES TO OPERATION REPORT

ANNEX 1	PROJECT IMPLEMENTATION AND PROCUREMENT PLAN
ANNEX 2	GREEN ASSESSMENTS
ANNEX 3	EBRD SSF PROPOSAL FOR CO-INVESTMENT GRANT ALLOCATION
ANNEX 4	KYRGYZ ENERGY SECTOR AND SHAREHOLDING STRUCTURE
ANNEX 5	HISTORICAL FINANCIAL STATEMENTS

ANNEX 1 - PROJECT IMPLEMENTATION AND PROCUREMENT PLAN

Procurement classification – *Public [sovereign]*

[REDACTED]. This is the first EBRD financed project with OJSC NEGK, although it should be noted that the Bank has previously worked with OJSC Vostokelectro and OJSC Oshelectro, that prior to 2022 existed as separate distribution companies, however at the end of 2022 have been merged with OJSC NEGK. After the merger, OJSC Vostokelectro and OJSC Oshelectro ceased to exist as separate entities and OJSC NEGK became the Bank's existing client.

For the purposes of this annex, the reference to the Client is a reference to the National Electric Grid of Kyrgyz Republic OJSC. The Client's capacity was assessed as a part of the Project due diligence by the PIA using the EBRD capacity assessment toolkit (simplified). All categories, i.e. legal framework, organisation of procurement function, support & control systems, staffing, record keeping, procurement planning, procurement cycle, general assessment of the Client, as well as the project risks were assessed.

Areas of opportunities and improvements have been identified and discussed with the Client. Based on this assessment, the overall risk on procurement has been identified as "Moderately Low". It has been determined that although the PIU is established with the composition of 7 people, it has limited experience of dealing with international procurement according to the Bank's PP&R. Therefore, a qualified PIU Consultant will be hired (funded by the TC Funds) to support the Client in the tender preparation phase as well as during the whole procurement and project implementation phase.

Contracts risk assessment – Moderate High

The contracts under the Project fall in the risk category "*Moderate High*". Apart from the Consultancy Contract (PIU Consultant), there will be three main Bank-financed contracts under the Project, namely: (i) one contract for supply of an advanced metering system (ASKUE), (ii) another contract for the supply of equipment and materials necessary for the installation of smart meters, and the third contract equipment and materials for rehabilitation of distribution lines. These contracts will be procured as open tenders using the EBRD's Standard Tender Documents for procurement of Goods and the resulting contracts will follow "General Conditions for Supply of Goods and Related Services" (2022) by EBRD.

Project implementation arrangements:
OJSC NEGK will be required to enhance the established Project Implementation Unit. The Client's PIU will be assisted by a qualified PIU Consultant for the preparation of tender documents (including technical specifications) for Goods, procurement process and implementation of contracts financed under the Project. This arrangement should strengthen the project implementation ability within OJSC NEGK and mitigate the risks of procurement as well as overall project implementation related delays. Installation works of the procured Goods (including smart meters) will be done by NEGK, as it was the case in preceding Oshelectro and Vostokelectro projects.

Procurement arrangements:
First and third Goods contract mentioned above in Contracts Risk Assessment section will be procured via ECEPP using the 'Open' single stage, as long as the Client will use the similar

specifications as in case of Oshelectro and Vostokelectro projects. The second Goods contract mentioned above will follow the 'Open' Multi-Stage tendering process through ECEPP, as long as the Employers Requirements are yet to be finalised. The tendering procedures will be conducted in accordance with the Bank's PP&R Section III Article 3 and using the Bank's Standard Tender Documents for Goods.

The PIS consultancy contract will be procured via ECEPP in accordance with the EBRD PP&R Section III Article 3. E&S capacity building consultancy for OJSC NEGK will follow the Bank led procurement process using a Direct Contracting method.

All contracts will be subject to the Bank's prior review. The Project procurement plan is provided below. No derogation from the Bank's PP&Rs is proposed. [REDACTED].

ANNEX 2 – GREEN ASSESSMENTS

Introduction

The Project entails financing of the procurement of (i) household smart electricity meters and related software in the Osh, Jalal-Abad, Tupe and Chuy regions of Kyrgyz Republic and (ii) materials for rehabilitation of low voltage 0,4 kV distribution lines in the country.

The Project has been assessed for alignment with the mitigation and adaptation goals of Paris Agreement. ESD performed a screening of the Project and concluded that it does not face any potentially material physical climate risks. Sector and the project type is included in the 'aligned list'.

Paris alignment assessment

General screening of alignment with the mitigation goals of Paris Agreement

- The project/economic activity is included in the joint MDB '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

- The project is considered aligned with the objectives of the Paris Agreement as climate resilience measures integrated into project design have addressed identified project vulnerabilities.
- The project is unlikely to undermine climate resilience of the system in which it operates.

Climate Adaptation

The Client is planning to replace existing low voltage conventional distribution lines with Aerial Bundle ("AB") Cables, which means that unlike existing cables the new cables will be weather resistant and insulated. AB cables provide better efficiency and are less prone to electricity pilferage. Existing low voltage distribution lines at OJSC NEGK are significantly worn out (at 60-70% wear-out rate), causing multiple breakdowns during the year. Increased cable resistance is also addressing climate change risks such as changing precipitation patterns.

GET attribution

The Project is expected to lead to a reduction in GHG emissions estimated at 17,191 tonnes of CO2 annually.

Climate-related financial risk

The CART is sovereign. Physical Climate Risk Score is 2.0 and Carbon Transition score is 3.0.

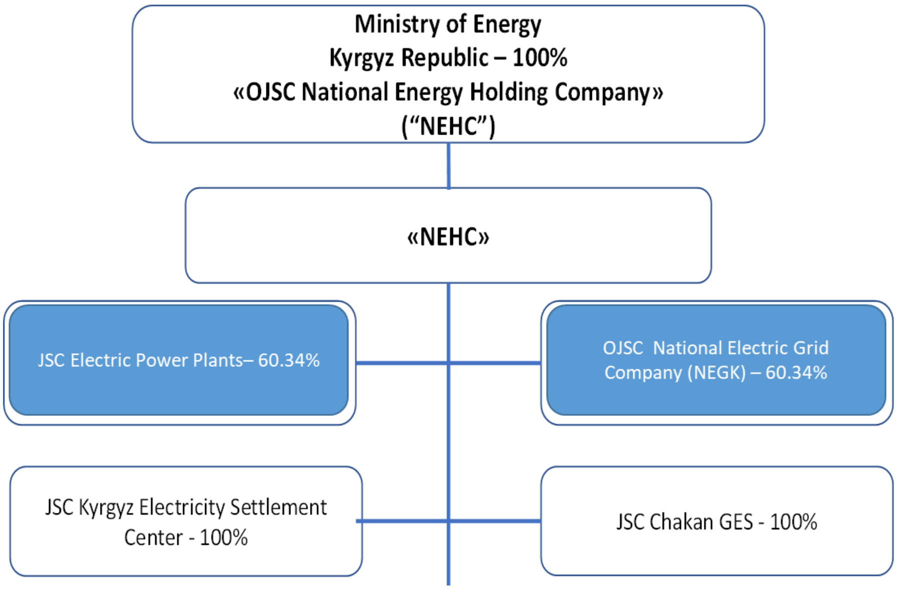
Economic assessment

Not applicable.

ANNEX 3 – EBRD SSF PROPOSAL FOR CO-INVESTMENT GRANT ALLOCATION

[REDACTED].

ANNEX 4 – ENERGY SECTOR AND SHAREHOLDING STRUCTURE



Brief description of the companies:

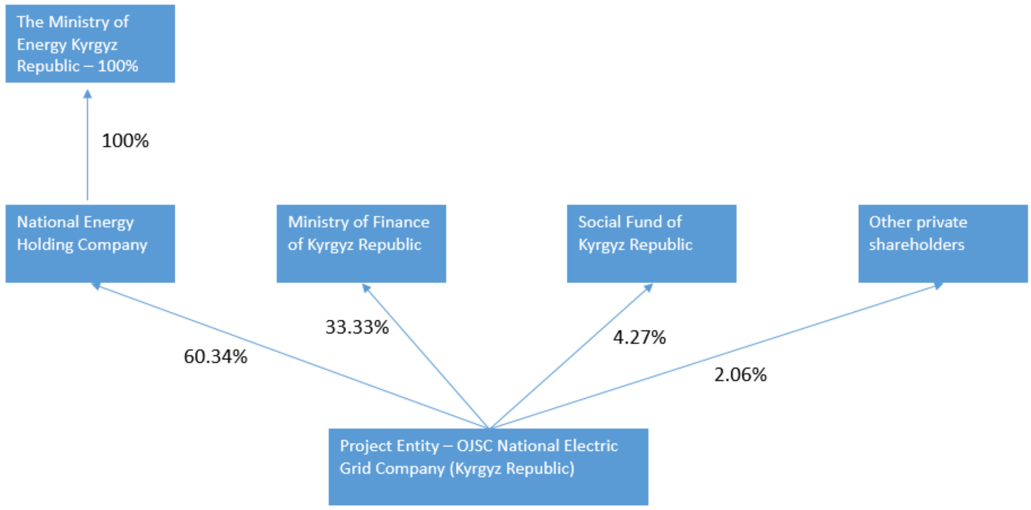
i. **NEHC:** Established in January 2016 for the purpose of unifying the electricity generator, transmission and distribution companies, 100% owned by Ministry of Energy.

ii. **JSC Electric Power Plants:** Largest electricity generator in the Kyrgyz Republic, owns 7 large HPPs and 2 CHPs with a total installed capacity of c. 4.3GW.

iii. **OJSC National Electric Grid Company of Kyrgyz Republic (“NEGK”):** National transmission company, which recently merged with five distribution companies, namely, Severelectro, Vostokelectro, Oshelectro, Jalalabatelectro and Bishkekteploset.

iv. **JSC Kyrgyz Electricity Settlement Center:** Established in August 2015 for the purpose of improving transparency of the country’s power and associated revenue flows.

The shareholding structure of the Project Entity (NEGK) is the following:


The Ministry of Energy Kyrgyz Republic – 100%
100%
National Energy Holding Company
Ministry of Finance of Kyrgyz Republic
Social Fund of Kyrgyz Republic
Other private shareholders
60.34%
33.33%
4.27%
2.06%
Project Entity – OJSC National Electric Grid Company (Kyrgyz Republic)

ANNEX 5 – HISTORICAL FINANCIAL STATEMENTS

National Electric Grid of Kyrgyz Republic OJSC
in EUR thousands

	2021	2022
Assets		
Non-Current Assets		
Property, plant, equipment and intangible assets	633,527	708,084
Advances paid, long-term part	13,540	0
Investments	215	215
Other assets, long term part	44	36
	647,325	**708,335**
Current Assets		
Inventories	13,956	19,241
Trade and other accounts receivable	13,683	17,469
Advances paid, short-term part	3,089	1,735
Taxes paid in advance	334	1,560
Restricted cash	26,688	99
Cash and cash equivalents	11,838	5,829
Other assets, short term part	38	182
	69,627	**46,114**
Total Assets	**716,952**	**754,449**
EQUITY AND LIABILITIES		
EQUITY:		
Share capital	29,103	29,103
Repurchased shares	0	-114
Reserve capital	2,738	2,738
Accumulated deficit	-15,651	-26,742
TOTAL EQUITY	**16,190**	**4,985**
NON-CURRENT LIABILITIES		
Borrowings, long-term part	616,792	607,747
Deferred income, long-term part	10,910	13,971
Liabilities under contracts with suppliers	2,551	2,476
Deferred tax liabilities	7,804	7,804
Trade accounts payable, long-term part	0	1,865
Employee defined benefit obligations	2,377	1,853
	640,434	**635,715**
CURRENT LIABILITIES:		
Borrowings, short-term part	24,389	63,918
Trade accounts payable, short-term part	16,270	26,223
Advances received	2,614	2,882
Taxes payable	7,163	8,026
Employee benefit obligations	7,879	9,860
Other liabilities	2,014	2,840
	60,329	**113,749**
TOTAL LIABILITIES	**700,762**	**749,464**
TOTAL EQUITY AND LIABILITIES	**716,952**	**754,449**

National Electric Grid of Kyrgyz Republic OJSC
in EUR thousands

	2021	2022
STATEMENT OF PROFIT AND LOSS		
Revenue	195,690	223,001
Cost of Sales	-156,323	-173,880
Gross Profit	39,367	49,121
Selling expenses	-20,587	-24,023
General and administrative expenses	-9,808	-11,341
Net loss on foreign exchange oprations	-10,772	-2,682
Financial gain	584	481
Finance cost	-29,745	-34,218
Other operating income	3,107	5,054
Other operating expenses	-489	-742
Other non-operating (expenses)/income,net	1,048	-2,133
Loss before income tax	-27,294	-20,482
Income tax	-472	0
Net loss for the year	-27,294	-20,482
Other comprehensive income / (loss)	-15	671
Total comprehensive loss	**-27,309**	**-19,811**
STATEMENT OF CASH FLOW		
Proceeds from sale of services	209,977	184,439
Other proceeds	1,869	7,607
Interest received	578	0
Payments to suppliers for goods and services	-97,068	-31,131
Payments of payroll and related taxes	-47,369	-57,431
Other payments	-28,805	-37,576
Cash flows from operating activities	**39,182**	**65,908**
Interest paid	-6,393	-6,996
Income tax paid	-1,440	-1,906
Net cash inflow from operating activities	**31,349**	**57,007**
CASH FLOW FROM INVESTING ACTIVITIES		
Purchase of fixed assets	-42,155	-72,538
proceeds from sale of fixed assets	0	3
Interest and dividends received	6	6
Repayment of deposit	0	90
Net cash flows used from investing activities	**-42,149**	**-72,440**
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from borrowings	23,042	37,682
Repurchase of shares	0	-7
Dividends paid	-287	-297
Net cash inflow from financing activities	**22,754**	**37,378**
Effect of foreign exchange differences on cash and cash equivalents	299	-821
Effect of changes in expected credit losses on cash and cash equivalents	1	0
Net increase of cash and cash equivalents	**12,254**	**21,124**
Cash and cash equivalents, at the beginning of the year	10,528	11,838
Changes in restricted cash	-10,944	-27,168
Cash and cash equivalents, at the end of the year	**11,838**	**5,795**