

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

Approved by the Board of Directors on 9 October 2024¹

JORDAN

**NEPCO NORTHERN GREEN SUBSTATION
NEPCO NORTHERN GREEN TRANSMISSION LINE**

[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.

TABLE OF CONTENTS

TABLE OF CONTENTS	2
ABBREVIATIONS / CURRENCY CONVERSIONS	3
PRESIDENT’S RECOMMENDATION	4
BOARD DECISION SHEET	5
ADDITIONAL SUMMARY TERMS FACTSHEET	6
1. STRATEGIC FIT AND KEY ISSUES	9
1.1 STRATEGIC CONTEXT	9
1.2 TRANSITION IMPACT.....	10
1.3 ADDITIONALITY	13
1.4 SOUND BANKING - KEY RISKS.....	14
2. MEASURING / MONITORING SUCCESS.....	15
3. KEY PARTIES.....	17
3.1 BORROWER COMPANY	17
3.2 GUARANTOR.....	17
4. MARKET CONTEXT.....	18
5. FINANCIAL ANALYSIS.....	19
5.1 FINANCIAL PROJECTIONS.....	19
5.2 SENSITIVITY ANALYSIS.....	19
5.3 PROJECTED PROFITABILITY FOR THE BANK	19
6. OTHER KEY CONSIDERATIONS	20
6.1 ENVIRONMENT	20
6.2 INTEGRITY.....	22
6.3 OTHER ISSUES	22
ANNEXES TO OPERATION REPORT	23
ANNEX 1 – SHAREHOLDING STRUCTURE	24
ANNEX 2 – GREEN ASSESSMENT	25
ANNEX 3 – PROJECT IMPLEMENTATION	28
ANNEX 4 – PROJECT LOCATION.....	29
ANNEX 5 – SSF FICHE.....	30

ABBREVIATIONS / CURRENCY CONVERSIONS

ABC	Anti-bribery and Corruption	KPI	Key Performance Indicator
AfD	Agence Francaise de Développement	kV	Kilovolt
ASE	Amman Stock Exchange	LACP	Land Acquisition and Compensation Plan
BDS	Board of Director Series	LNG	Liquefied Natural Gas
BOO	Build-Own-Operate	MEMR	Ministry of Energy and Mineral Resources
Bps	Basis points	MMBTu	Million British Thermal Unit
BST	Bulk Supply Tariff	MOF	Ministry of Finance
CAGR	Compound Annual Growth Rate	MoU	Memorandum of Understanding
CAPEX	Capital Expenditure	MVA	Megavolt Ampere
CCGT	Combined Cycle Gas Turbine	MW	Megawatt
CEGCO	Central Electricity Generating Company	NEPCO	National Electric Power Company
CFADS	Cash Available for Debt Service	NTS	Non-Technical Summary
CGAP	Corporate Governance Action Plan	OHL	Overhead Line
CO ₂	Carbon Dioxide	OPEX	Operation Expenditure
COD	Commercial Operations Date	OPIC	Overseas Private Investment Corporation
CP	Condition Precedent	PIU	Project Implementation Unit
EBIT	Earnings Before Interest and Tax	PP&R	Procurement Policies and Rules
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortisation	PPA	Power Purchase Agreement
EDCO	Electricity Distribution Company	PPP	Purchasing Power Parity
EMRC	Electricity and Minerals Regulatory Commission	PR	EBRD Performance Requirements
EPC	Engineering, Procurement and Construction	PSD	Project Summary Documents
ESAP	Environmental and Social Action Plan	PV	Photovoltaic
ESDD	Environmental and Social Due Diligence	REEEL	Renewable Energy and Energy Efficiency Law
ESIA	Environmental and Social Impact Assessment	SEP	Stakeholder Engagement Plan
EU NIP	European Union Neighbourhood Investment Platform	SEPCO	Samra Electric Power Company
EUR	Euro	SOE	Stated-owned enterprise
FX	Foreign Exchange	SOFR	Secured Overnight Financing Rate
GDP	Gross Domestic Product	SSF	Shareholder Special Fund
GET	Green Economy Transition	TC	Technical Cooperation
GHG	Greenhouse Gases	TCO _{2e}	Tonne of Carbon Dioxide Equivalent
HFO	Heavy Fuel Oil	TOE	Tonne of Oil Equivalent
IDECO	Irbid District Electricity Company	USD	United States Dollar
IFC	International Finance Corporation		
IFRS	International Financial Reporting Standard		
IMF	International Monetary Fund		
IPP	Independent Power Producer		
JEPCO	Jordan Electric Power Company		
JOD	Jordanian Dinar		
KEPCO	Korea Electric Power Corporation		
Km	Kilometres		

CURRENCY CONVERSIONS

EUR / USD 1.09 (as of 09/2024)

USD / JOD 1.41(as of 09/2024)

PRESIDENT’S RECOMMENDATION

This recommendation and the attached Report concerning an operation in favour of the National Electric Power Company (“NEPCO”), a public shareholding company incorporated in Jordan, are submitted for consideration by the Board of Directors.

The operation consists of a sovereign-guaranteed loan to NEPCO of up to USD 56.5 million (EUR 51.9 million equivalent), consisting of two tranches as follows: (i) a first tranche committed at signing of up to USD 28.3 million (EUR 25.9 million equivalent) to finance a high voltage electricity substation and (ii) a second tranche of up to USD 28.3 million (EUR 25.9 million equivalent) to finance associated overhead transmission lines (OHTL), both located in north-eastern Jordan (the “Project”). The commitment of the second tranche is subject to a separate Board approval following the completion of the public disclosure and consultation period of the E&S package. The loan will be guaranteed by the Hashemite Kingdom of Jordan represented by the Ministry of Finance. The European Union Neighbourhood Investment Platform (“NIP”) will provide grants of up to EUR 14.6 million, of which up to EUR 12.4 million will be contributed as an investment grant and EUR 2.2 million will be contributed as technical cooperation to appoint a Project Implementation Unit (PIU) consultant.

The operation will enable NEPCO to reinforce the electricity transmission grid in the north-eastern part of Jordan through the construction of a high voltage substation and transmission lines. The expected transition impact of the Project stems from the Green dimension, through the reduction in curtailment of renewable energy generation units, reducing transmission losses, and facilitating the construction of additional renewable energy generation in the north eastern part of Jordan. The Project will also have an Inclusive impact through the promotion of human capital development by introducing a new nationally accredited training programme for NEPCO’s Electrical Training Centre to respond to the market’s need for digital skills and energy efficiency competences at the technician level. The Project will also support the design of National Occupational Skills Standards that will identify and codify the necessary skills and competencies for in-demand occupations in the sector.

TC and grant support for this operation is expected to be provided by the EU NIP and EBRD Shareholder Special Fund (“SSF”). The EU NIP Board approval was received on 12 June 2024. Board approval is sought for the use of SSF under the SSF Work Plan 2023-2024 in the amount of EUR 579,000 for the part of TC assignments.

I am satisfied that the operation is consistent with the Bank’s Strategy for Jordan as it will (i) enhance vocational training and skills development for youth and women; and (ii) contribute to the long-term stability of the electricity sector. The Project is also consistent with the Energy Sector Strategy, and the Bank’s Equality of Opportunity Strategy for 2021 - 2025.

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

Odile Renaud-Basso

BOARD DECISION SHEET

JORDAN - NEPCO Northern Green Substation JORDAN - NEPCO Northern Green Transmission Line	
Transaction /Board Decision	<p>Board approval² is sought for a sovereign-guaranteed loan of up to USD 56.5 million (EUR 51.9 million eq.) with two tranches: (i) up to USD 28.3 million (EUR 25.9 million eq.) committed immediately for the procurement, construction and operation of a 400/132/33 kV high voltage electricity substation ("Tranche 1" developed under the NEPCO Northern Green Substation project), and (ii) up to USD 28.3 million (EUR 25.9 million eq.) uncommitted for the procurement, construction and operation of associated overhead transmission lines remaining uncommitted ("Tranche 2" developed under the NEPCO Northern Green Transmission Line project) in Jordan. Both tranches will have an 18-year maturity [REDACTED]. The commitment of Tranche 2 is subject to a separate Board approval following the completion of the public disclosure and consultation of the E&S disclosure package. The Bank mobilised from EU NIP an investment grant of EUR 12.4 million and a EUR 2.2 million TC. The Ministry of Finance, representing Jordan, will provide a sovereign guarantee. Board approval is also sought for utilisation of funds under the current SSF Work Plan in the amount of EUR 579k in favour of the Project.</p>
Client	<p>NEPCO a 100% state owned public company established in Jordan serving as the transmission system owner and operator, as well as the sole buyer of electricity generation. As of 2023, the national grid has a total capacity of 6 GW, with renewable energy contributing 27% (1.6 GW). The grid also includes over 1,900 km of high-voltage lines and 3,900 km of medium-voltage lines.</p>
Main Elements of the Proposal	<ul style="list-style-type: none"> • Transition impact <u>Primary Quality – Green:</u> The Project will strengthen the transmission network, therefore reducing transmission losses, curtailment of renewable energy generation, and increasing the grid's capacity to introduce new renewable energy generation. <u>Secondary Quality – Inclusive:</u> The Project will enhance human capital by enhancing access to nationally-accredited training programmes and creating National Occupational Skills Standards. • Additionality <i>Financing structure</i> – EBRD offers long-term financing currently not available in the local market. <i>Knowledge, innovation, and capacity building</i> – EBRD provides expertise, innovation, knowledge and capabilities that are material to realise the Project's objectives, incl. support to strengthen the capacity of the client in relation to procurement and E&S issues. • Sound banking NEPCO's financial situation is challenging, but as a systemically important utility, NEPCO has a consistent track record of honouring its debt obligations. The facility ultimately relies on the sovereign guarantee.
Key Risks	<p>NEPCO Credit Risk – [REDACTED]. <i>Mitigant:</i> The loan is fully guaranteed by the Jordanian Government. NEPCO, a natural monopoly with regulated tariffs, has a stable revenue stream and operates a critical infrastructure for the country. Despite high debt/GDP, Jordan's outlook is stable due to global market access, fiscal reforms, and strong donor support.</p> <p>Construction and Operation Risk – the Project could be adversely affected by construction delays and cost overruns should unforeseen issues arise and could also experience operational problems. <i>Mitigant:</i> the Project will be implemented on an EPC turn-key basis and in accordance with the Bank's PP&R. A project implementation unit will be formed, supported by an external consultant to manage construction and operation.</p>
Strategic Fit Summary	<p>The Project is aligned with the Strategy for Jordan as it will (i) enhance vocational training and skills development for youth and women; and (ii) contribute to the long-term stability of the electricity sector. The Project is also consistent with the Energy Sector Strategy, the Equality of Opportunity Strategy for 2021 - 2025.</p>

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

ADDITIONAL SUMMARY TERMS FACTSHEET

EBRD Transaction	<p>The Bank is providing a sovereign-guaranteed loan of up to USD 56.5 million (EUR 51.9 million equivalent) consisting of two tranches:</p> <ul style="list-style-type: none"> (i) Tranche 1 of up to USD 28.3 million (EUR 25.9 million equivalent) developed under the NEPCO Northern Green Substation project to finance a 400kV substation, to be committed at signing, and (ii) Tranche 2 of up to USD 28.3 million (EUR 25.9 million equivalent) developed under the NEPCO Northern Green Transmission Line project to finance an associated overhead transmission lines (OHTL). [REDACTED]. <p>Both tranches will have a tenor of up to 18 years [REDACTED]. The Bank mobilized (i) investment grants of up to EUR 12.4 million (USD 13.5 million equivalent) and (ii) a TC of EUR 2.2 million from the EU NIP to support the Project.</p> <p>The Government of Jordan, represented by the Ministry of Finance (“MoF” or the “Guarantor”), will provide a sovereign guarantee.</p> <p>[REDACTED]. In parallel, a request to increase the EU NIP TC and grant package of EUR 6.6 million to EUR 14.6 million is proposed to allow (i) for the associated OHTL to be added to the Project costs and (ii) to increase the grant intensity of the Project to address increased affordability considerations in view of the sharp increase in financing costs since 2022.³</p>
Existing Exposure	<p>Exposure to NEPCO: EUR 336 million loan with EUR 220 million operating assets as of August 2024. Both transactions are sovereign-guaranteed.</p> <p>Exposure to sovereign: the Bank has five sovereign-backed loans in the water sector, two in the power sector, and one for the Greater Amman Municipality (GAM) with a total EBRD exposure of c. EUR 421 million, and operating assets of EUR 248 million.</p>
Maturity / Exit / Repayment	Tenor of up to 18 years [REDACTED]
Potential AMI eligible financing	N/A
Use of Proceeds - Description	<p>Tranche 1– to finance the construction of a 400kV high voltage transmission substation in north-eastern Jordan, which will help in improving the grid’s capacity to absorb existing and new renewable energy projects.</p> <p>Tranche 2– to finance the construction of:</p> <ul style="list-style-type: none"> - a new 35 km double circuit 400 kV OHTL, connecting the new substation with the existing Samra and Amman West substations, - a new 3 km 132 kV OHTL connecting the new substation to the existing Hasan Industrial substation, - a new a 9 km 132 kV OHTL connecting the Project to the existing Jerash substation, and - replacement of a 11 km line connecting Hasan industrial to Rehab. <p>For both tranches, the Borrower will be required to follow the Bank’s PP&R for public sector projects and appoint an implementation technical consultant (PIU Consultant) to assist in tendering, evaluation, and monitoring as a CP to first disbursement.</p>

³ An EU NIP TC and grant package for the Project was approved in June 2024. The amount approved was EUR 21.5 million of TC and grant package. Since the time of approval the amount of total Project cost was reduced so that the amount of the EU NIP package was reduced proportionally to EUR 14.6 million.

	<p>All loan drawdown requests must also be supported by documentary evidence, and progress reports prepared and submitted by the PIU Consultant.</p> <p>The loan will be disbursed in line with the Bank's Disbursement Handbook for Public Sector Loans. The use of proceeds will be monitored through the application of the Bank's PP&R, via conditions precedent to disbursement, review of the progress reports and monitoring visits.</p> <p>Procurement is described in more detail in <i>Annex 3</i>.</p>
Investment Plan	[REDACTED]
Financing Plan	[REDACTED]
Key Parties Involved	<p>Borrower: NEPCO.</p> <p>Guarantor: Government of Jordan, represented by MoF.</p>
Conditions to subscription / disbursement	<ul style="list-style-type: none"> • [REDACTED]
Key Covenants	<ol style="list-style-type: none"> Periodic reporting, including financial, environmental, and technical. Implementation of the Environmental and Social Action Plan (ESAP), including the Resettlement Plan (RP).
Security / Guarantees	Sovereign Guarantee
Other material agreements	<ul style="list-style-type: none"> • A guarantee agreement will be entered into between the Bank and the MoF (the "Guarantee Agreement"), backing the obligations of the Borrower. • EU Grant Agreement and Delegation Agreements between the Bank and the Borrower for the EU NIP grant.
Associated Donor Funded TC and Blended Concessional Finance	<p>A. Technical Cooperation (TC)</p> <p>Project preparation TCs</p> <ul style="list-style-type: none"> - TC 1: Environmental and Social Due Diligence - budget of EUR 60.2k financed by SSF. The aim of this TC was to assess the adverse E&S impacts of the Project, assess compliance with applicable laws and EBRD ESP and PRs, determine mitigation measures and identify potential E&S opportunities. This TC is completed. - TC 2: Environmental and Social Impact Assessment - budget of EUR 74k financed by SSF. The aim of this TC is to identify and mitigate future adverse environmental and social impacts of the proposed Project and ensure that suitable mitigants are introduced following the addition of the OHTL component. - TC 3: Land Acquisition Audit - budget of EUR 70k financed by SSF. The aim of this TC is to audit the process of acquiring the substation land and assess compliance with applicable laws and EBRD ESP and PRs, determine mitigation measures. <p>Post- signing TCs</p> <ul style="list-style-type: none"> - TC 4: Supporting implementation of Inclusion TI objectives - budget of up to EUR 200k financed by SSF. The aim of this TC, to be implemented in two phases, is to facilitate achievement of the Inclusion TI objectives including development of the new training programme and the introduction of new occupational skills standards. - TC 5: PIU and Construction Supervision Consultant- budget of up to EUR 2.2 million financed by EU NIP, see below. The assistance includes the appointment of a consultant who will work with NEPCO to ensure that during the construction stage work is carried out in accordance with the quality required by the contract, within the stipulated time and at the correct price. - TC 6: ESAP implementation support consultant – budget of EUR 350k financed by SSF. The aim of this TC is to offer NEPCO specialised E&S support to build capacity within the relevant teams and ensure compliance with the ESAP requirements.

	<p>- TC 7: Independent E&S Monitoring Consultant – budget of EUR 229k financed by SSF. The aim of this TC is to monitor the implementation of the actions and regularly report to the Bank on the Project's compliance with the ESAP.</p> <p>Client contributions The above TC assignments will be non-reimbursable TCs required to support the Project. The Company will make a parallel contribution in the form of any VAT or other indirect taxes related to the post-signing TC assignments as a parallel cost sharing contribution to the Project (VAT is levied at 16 per cent in Jordan).</p> <p>B. Co-investment grants / Concessional Finance (Non-TC) The Project will be co-financed by the EU NIP in the amount of EUR 12.4 million (USD 13.5 million equivalent) in the form of an investment grant to be allocated equally across the two tranches. The grant will contribute c.19% of the Project cost. Grant proceeds will be blended with the EBRD loan to be extended to NEPCO to support the construction of the new substation, the new overhead transmission lines and related equipment.</p>
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[REDACTED]

INVESTMENT PROPOSAL SUMMARY

1. STRATEGIC FIT AND KEY ISSUES

1.1 STRATEGIC CONTEXT

Between 2011 and 2016, the influx of Syrian refugees significantly increased energy demand in Jordan. To address the increased demand, the Jordanian government launched an ambitious plan leveraging the Renewable Energy and Energy Efficiency Law (REEEL) of 2010 to explore the country's vast renewable resources. This initiative attracted substantial private investments, resulting in over 2.4 GW of private renewable capacity currently in operation. As a result, the contribution of renewable energy in Jordan's energy mix has grown remarkably from less than 1% in 2012 to over 27% in 2023. Most of the 2.4 GW renewable energy capacity developed to date has been established by the private sector under long-term sovereign-guaranteed power purchase agreements (PPAs) with NEPCO, as well as corporate PPAs under the wheeling regulation.

At the same time, the expansion of renewable energy generation created constraints in the country's electricity grid, leading to a halt in new investments. After a decade of underinvestment, new renewable energy sources are needed to (i) meet the compounded increase in demand over the last 10 years, (ii) address the anticipated increase in electrification across the industrial, household, and transport sectors, and (iii) move the decarbonisation of the electricity sector forward (including retirement of the fossil fuel capacity).

The strain on the transmission grid has created operational challenges, particularly during the off-peak hours. Significant investment in transmission infrastructure is needed to accommodate both existing and future renewable energy capacity. Without these upgrades, renewable energy curtailment could reach 24% of total domestic generation by 2027, amounting to around 1,250 GWh⁴.

To address these issues, NEPCO invested in the Green Corridor project in 2015, funded by AfD and the EU, to construct over 200 km of high-voltage overhead lines and transmission substations. This project successfully alleviated bottlenecks in transmitting renewable energy from the southern generation centers to the northern consumer centers around Amman. However, the Green Corridor's capacity is now fully subscribed, necessitating further transmission system upgrades for future renewable developments. Reinforcement is particularly needed for the high-voltage transmission between the generation centers in the north-east of Jordan around Mafrq and the consumer centers around Amman.

NEPCO reforms: The EBRD's 2018 NEPCO Restructuring Loan introduced key reforms in corporate governance, compliance, financial forecasting, risk management, e-procurement, and renewable energy integration. Interventions included technical support for the 2019-2030 master plan, financial unbundling, developing operating budgets and financial models for each business line, a board composition study, amendments to the Company's charter and bylaws, and appointing a compliance officer. To date, NEPCO has completed over 94% of the 76 required reform actions, with nearly 83% of the loan amount disbursed. Significant progress has been made in the CAPEX program, including awarding four contracts totalling USD 28.5 million and nearing final tendering stages for activities valued at USD 25.5 million.

Additionally, the Bank extended the 2021 VISIP facility to assist NEPCO during the Covid-19 pandemic, fully disbursing USD 100 million. NEPCO has made significant progress on

⁴ 2018 CESI Report on the Reliability of Jordan's Transmission Network.

objectives, including amending the internal audit charter, introducing apprenticeship and certification programs, implementing new HR policies for equal opportunities and gender mainstreaming, and developing a certification program for electrical technicians.

A number of the EBRD-initiated reforms were leveraged by the World Bank's 2023 Electricity Sector Efficiency and Reliability Program to ensure NEPCO continues on the right trajectory.

Human capital challenges: Unemployment is one of the most pressing economic challenges in Jordan with nearly 21.4 percent unemployed as of 2024, and especially high youth unemployment reaching 39.4 percent including among those with secondary and tertiary education. This is indicative of the significant skills mismatch between education institutions' outputs and the demand for skilled labour by employers. Hence, there is a need to strengthen skills development in line with market needs to build human capital for a qualified workforce, including in the energy sector and in line with the renewable energy transition.

Project: The Project introduces a 400kV substation and related transmission lines in an area with existing transmission bottlenecks. The Project is expected to eliminate approximately 300 GWh of curtailed renewable energy generation annually by 2028, resulting in greenhouse gas (GHG) emission reductions exceeding 140,000 tCO₂ per year. The Project will also reduce transmission losses by at least 20% (from the current levels of 2.25%) by improving power flow within the national network, leading to further emission reductions of around 68,430 tCO₂ per year.

This substation is part of the first phase of the Eastern Green Corridor project, which will include additional switching stations and high-voltage transmission lines in northeastern Jordan to connect more renewable energy capacity to the grid. The Project builds on two existing NEPCO projects supported by the EBRD, which include investments to upgrade several medium-voltage substations and enhance NEPCO's digital infrastructure.

The Project will promote human capital development by introducing a new nationally accredited training programme for NEPCO's Electrical Training Centre to respond to the market's need for digital skills and energy efficiency competences at the technician level. The Project will also support the design of National Occupational Skills Standards that will identify and codify the necessary skills and competencies for in-demand occupations in the sector.

The Project is aligned with Jordan's Country Strategy and its first two strategic priorities on promoting economic inclusion across sectors, as well as further developing sustainable municipal infrastructure and green energy. The Project is also aligned with the Bank's Equality of Opportunity Strategy for 2021 – 2025. The Project is also in-line with the Bank's Green Economy Transition 2.1 Approach 2021-2025 and the Energy Sector Strategy 2024-2028 which underlines the importance of investing in grid infrastructure to allow for ramp up in renewable energy. The Project contributes to SDG 7 – Affordable and Clean Energy as it will contribute to ensure access to affordable, reliable, sustainable and modern energy for all.

1.2 TRANSITION IMPACT

Primary Quality: Green

Obj. No.	Objective	Details
1.1	<i>The percentage of EBRD use of proceeds that supports a green economy transition and therefore qualifies as</i>	The Projects are attributed 100% GET. This share has been calculated in line with the criteria for "Greenfield transmission or distribution of electricity that supports delivery of non-nuclear, very-low-carbon electricity". The new substation and transmission line will help reduce the energy losses of the

	<i>GET finance exceeds 50%.</i>	transmission system, will reduce curtailment and support the addition of the new renewable energy capacity planned for 2027-2030.
1.2	<i>The project results in energy savings that exceed 0.1% of annual national energy consumption, so significantly contributes to improved energy efficiency.</i>	The Project will reduce transmission losses by at least 20% of existing transmission losses (c.2.25%), and include advanced digital technology for asset monitoring, control, and maintenance. Therefore, the expected reduction of transmission losses of around 0.5% translates to a similar reduction in annual national energy consumption in excess of 0.1%.

Secondary Quality: Inclusive

Obj. No.	Objective	Details
2.1	<i>EMPLOYABILITY: The Project broadens access to market-relevant skills and training opportunities, boosting the supply of human capital with demonstrably moderate need and outstanding effectiveness.</i>	The Project will enhance access to market-relevant skills and employment opportunities for young labour market entrants by strengthening the capacity of NEPCO to improve the school-to-work transition of prospective electrical technicians. NEPCO will introduce a new vocational programme to be nationally accredited through the Technical and Vocational Skills Development Commission (TVSDC), established by the government in 2019 as an independent agency mandated to support the implementation of the National Strategy for Human Resources Development. Over the next five years, the programme will target at least 400 youth (selected among Tawjihi high-school graduates), while even more youth will benefit in the longer run. The course to be designed and delivered by NEPCO's Electrical Training Centre (ETC) will last for six months and aim to complement the existing vocational course for electricians that covers mostly the practical foundations. The new course will focus on the digital skills and energy efficiency competences that different types of electrical technicians need (e.g. electrical assemblers, linepersons, wiremen, substation operators, installation and maintenance specialists, domestic installers), in line with the sector's transition towards smart energy systems. Upon completion, graduates will be part of the talent pool of electrical technicians specialised in digital technologies and will be able to apply for jobs at NEPCO as well as at any of the electricity distribution companies of Jordan (e.g. JEPCO, EDCO, IDECO, etc.).
2.2	<i>EMPLOYABILITY: The Project delivers inclusive business policies, practices or standards at the client level with verifiable commitment within 1-2 distinct behavioural change areas</i>	The Project will contribute to the development of a forward-looking vision for NEPCO ETC's skills development needs and the broader energy transmission and distribution industry. This will involve proactively identifying the industry's medium to long-term business needs, including in terms of forecasting skills gaps and assessing the relevance of different competences. As a first step, a forward-looking sectoral skill needs assessment will identify the main trends (e.g.

		digitalisation, increase of renewables) that are going to affect the energy market in the near future. These trends will be mapped into relative job and skills profiles, which will be required to support the sector's transformation. The various skills profiles will then be prioritised into a list of top "key profiles" (1-2 profiles per trend). The results of this exercise will be outlined into a Human Capital Development Plan for the industry, identifying medium and long-term skills development needs in the sector as it continues to develop in line with international best practice and emerging trends. The Plan will inform Company-level needs too, allowing NEPCO ETC to better target its training offer to respond to its workforce's skills gaps as well as to the broader sector's demands for skilled labour. This is crucial given ETC role in offering upskilling and reskilling programmes for recent graduates, employees of the major distribution companies in Jordan (e.g.: JEPCO, EDCO), and other energy companies in Jordan and across the region.
2.3	<i>EMPLOYABILITY: The Project encompasses sizeable impact on a policy, regional, or sectoral scale with measurable policy-level outcomes</i>	The Project will develop and support the introduction of new/updated National Occupational Skills Standards (NOSS) for at least three emerging key occupations in the energy field, including two at the (advanced) technician level (e.g. operator of SCADA systems, installer of smart meters), and one at the engineer level (e.g. dispatching engineer of renewable energy). The NOSS will be developed in alignment with the National Qualifications Framework and in line with NEPCO's needs and broader industry requirements. Their approval and introduction will be coordinated with the TVSDC and the Sector Skills Council on Water and Energy, and it will be supported by the involvement of other relevant sectoral stakeholders (e.g. the Jordan Engineers Association, etc.). Upon approval of the NOSS by the SSC on Water and Energy and the TVSDC, the TVSDC will be the main governmental agency responsible to ensure that all national training providers' curricula align with the skills demanded by the market as set forth in the NOSS. This work is of crucial importance in the energy sector where there is a need to define what new qualifications and skills are required to promote the green economy transition. The introduction of high quality, comparable and verifiable skills standards is a critical element, and best practice model, of a national skills policy. These standards allow companies to recruit based on transparent, competency-based skills requirements and enable education institutions to teach market-relevant skills in line with employer's needs. They thus ultimately enhance the employability of labour market entrants. This work is also aligned with the Government of Jordan's National Strategy for Human Resources Development and its Economic Modernization Vision, including the ongoing reform agenda on Technical and Vocational Education and Training (TVET)

		that aims at boosting the supply of skilled talent to facilitate the sector's green transition and sustainable development.
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Delivery risks: The key TI delivery risks are related to the construction of the substation on time and hence achieving the CO2 emission reduction, however this will be mitigated by the fact that from prior experience NEPCO implements 400kV substation on Turnkey basis which minimizes the risk of delayed completion.

1.3 ADDITIONALITY

Identified triggers: 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)	Description: NEPCO is an existing client to the Bank with two operations. Jordan's current transmission network is largely fully subscribed especially near load centres in the North. Through this operation the Bank will support the construction of a new 400kV substation which will help reduce system losses, improve absorption of renewable energy, and pave the way for additional grid reinforcement in the Northeastern part of Jordan. This Project is a priority for NEPCO and the government to improve the grid's reliability and facilitate exporting to neighbouring countries.
Additionality sources	Evidence of additionality sources
Financing Structure - EBRD offers financing that is not available in the market from commercial sources on reasonable terms and conditions, e.g. a longer grace period. Such financing is necessary to structure the project.	The offered grace period [REDACTED] allows the Company to complete the construction of the new substation with minimal additional financial burden.
Financing Structure - EBRD offers a tenor, which is longer than available to the client in the market on reasonable terms and conditions.	The longer tenor provided to NEPCO is not readily available in the market, this is especially important to provide NEPCO with sufficient fiscal space to proceed with other critical infrastructure investments, including energy storage, and other transmission infrastructure. The longer tenor will match the long-term nature of the assets and allow NEPCO and the government to plan the Company's financial turnaround [REDACTED].
Knowledge, innovation, and capacity building – EBRD provides expertise, innovation, knowledge and/or capabilities that are material to the timely realisation of the project's objectives, including support to strengthen the capacity of the client.	Through the Project, the EBRD will introduce high standards and practices via ESAP, and procurement that are still innovative for the country and the industry. The EBRD will involve external consultants and in-house experts in the implementation of technical cooperation activities of the Project.

1.4 SOUND BANKING - KEY RISKS

Risks	Probability / Effect	Comments
Credit Risk - Sovereign	Low/High	<p>Jordan's economy continues to face several challenges mainly related to a tightening fiscal space and high unemployment rates.</p> <p><i>Mitigation: Although Jordan has reached high levels of debt/GDP the overall IMF and rating agency outlook is stable mainly reinforced by Jordan's ability to access the global capital markets, fiscal reforms progress, strong donor support, and highly liquid financial sector. Moreover, the Ministry of Finance will sign a sovereign guarantee agreement under this transaction to support NEPCO's in case credit risk materialises.</i></p>
Credit Risk - NEPCO	Medium/High	<p>[REDACTED]</p> <p><i>Mitigation: NEPCO's payment obligations under the loan agreement are fully guaranteed by the Jordanian Government. Credit risk is also addressed by the fact that NEPCO is the national utility that operates as a natural monopoly with a regulated tariff and stable revenue stream. Although Jordan has reached high levels of debt/GDP the overall IMF and rating agency outlook is stable mainly reinforced by Jordan's ability to access the global capital markets, fiscal reforms progress, strong donor support, and highly liquid financial sector.</i></p>
Construction and Operation Risk	High/Medium	<p>Project could be adversely affected by construction delays and cost overruns should unforeseen issues arise and could also experience operational issues.</p> <p><i>Mitigation: The Project will be implemented on an EPC Turn-key basis and in accordance with the Bank's PP&R. A technical consultant will engage with NEPCO to ensure timely implementation of the Project and application of international best practices to avoid any unforeseen issues or operational problems. As part of the technical due diligence, the consultant reviewed NEPCO's operation and maintenance policies to ensure they have the required skills to operate and maintain the substation efficiently.</i></p>
FX and Interest rate risk	Low/Low	<p>The EBRD loan will be denominated in USD, while the revenues of the Borrower will be in JOD. The Project is potentially exposed to changes in interest rates.</p> <p><i>Mitigation: the FX rate risk is mitigated by the fact the JOD is officially pegged to the IMF's SDR since 1995, though in practice it is pegged to the USD at this rate.</i></p>

2. MEASURING / MONITORING SUCCESS

<i>Overall objectives of project</i>	<i>Monitoring benchmarks</i>	<i>Implementation timing</i>
- On-time project implementation	- Completion according to the timeline and within the budget.	[REDACTED]

Transition Impact Monitoring Indicators

Primary Quality: Green

Obj. No.	Monitoring indicator	Details	Baseline	Target	Due date
1.1	CO2e emissions reduced (tonnes/year)	The Project is expected to reduce transmission losses by 20%, resulting in emissions reduction of 68,430 tCO2/year. Additionally, the Project will also help absorb around 270MW of renewable energy capacity in the surrounding area. The expected curtailed renewable energy generation by 2025 for the surrounding projects is c.300 GWh/annually which would be eliminated by the new substation and thus yielding GHG emission reductions that exceed 140,000 tCO2 per year. Combined, the Project is estimated to decrease emissions by 212,052 tCO2/year.	0	212052	[REDACTED]
1.2	Primary energy saved (GJ/year)	The Project is expected to reduce transmission losses by 20%, equivalent to 179.14 GWh p.a.	0	644895	[REDACTED]

Secondary Quality: Inclusive

<i>Obj. No.</i>	<i>Monitoring indicator</i>	<i>Details</i>	<i>Baseline</i>	<i>Target</i>	<i>Due date</i>
2.1	Tailored training programme developed and implemented.	NEPCO will introduce a new, nationally accredited vocational training programme to be implemented by NEPCO's Electrical Training Centre for young electrical technicians. The program will last 6 months and focus on digital skills, energy efficiency competencies, and other emerging skills priorities in the energy transmission sector.	No	Yes	[REDACTED]
2.2	Recommended policy or strategy or regulatory framework/ standard agreed by relevant stakeholder(s)	The Project will develop a new Human Capital Development Plan aimed at identifying and strengthening key skills needed by NEPCO and the broader sector to support the energy transition.	No	Yes	[REDACTED]
2.3	Legal, institutional or regulatory frameworks in target areas improved.	The Project will support the improvement of the National Qualification Framework, by designing and introducing 3 new National Occupational Skills Standards in the energy sector to be approved by the Technical and Vocational Skills Development Commission (TVSDC).	No	Yes	[REDACTED]
2.4	Number of individuals enhancing their skills as a result of training	The new vocational programme for young electrical technicians will target 400 youth over the next 5 years (about 80 youth per year).	0	400	[REDACTED]

3. KEY PARTIES

3.1 BORROWER COMPANY

NEPCO is a 100% state-owned public shareholding company established in accordance with the General Electricity Law No. 10 (1996) on the 1st of September 1996 when the vertically integrated state-owned Jordan Electricity Authority was unbundled into 5 separate companies. See *Annex 1* for details on shareholding structure.

NEPCO is licensed by the Energy & Minerals Regulatory Commission (**EMRC**) to undertake four key roles in the Jordanian energy sector, namely:

- electricity transmission system operator, being responsible for the design, construction, ownership and safe operation of all electric power transmission at 400 kV and 132 kV voltages;
- single buyer (off-taker) of the electricity generated by state-owned and Independent Power Providers (**IPPs**), including utility scale renewable energy projects, as well as from abroad through imports;
- dispatcher of power from all generating units connected to National Transmission System (**NTS**) to the bulk-supply points of the distribution companies via the National Control Centre (at Amman South). At the moment, the dispatch is done based on a manual system; and
- single importer of hydrocarbons for electricity generation.

Revenues: NEPCO receives revenues from the sale of electricity to the three distribution companies operating in Jordan, which have responsibilities split geographically, and from the sale of electricity directly to 12 large consumers. NEPCO also has revenues generated from cross-border interconnections with neighbouring countries. The distribution companies pay to NEPCO the difference between the end-user tariff they have collected and the bulk supply tariff (BST) they are entitled to receive based on a Regulatory Asset Base (RAB) methodology as approved by the Regulator (EMRC). The end-user tariff is also set by EMRC.

Costs: NEPCO bears the cost of purchasing electricity at the national level, which costs vary depending on the source of power. Most generation companies have long-term power purchase agreements (PPAs) in place with NEPCO and the costs are based on capacity payments and generation payments for conventional generation, and generation for RE plants. NEPCO also bears the cost of imported fuel for the conventional power plants. This arrangement has led to severe pressures on the operational performance of NEPCO, as its cash flows are exposed to commodity price fluctuations since historically the fluctuations in the fuel price were not passed through to the end users.

3.2 GUARANTOR

The loan will be backed by a sovereign guarantee from the Government of Jordan, represented by the Jordanian Ministry of Finance.

4. MARKET CONTEXT

Key statistics for the Jordanian energy sector:

General	Figure
Population (2024)	11,613,629
GDP per capita (2022, PPP USD)	9,871
Primary energy consumption (2022, kgoe)	9,471
Imports as % of primary energy consumption (2018, %)	88
Electricity	Figure
Electricity generation (2022, GWh)	20,763
Electricity consumption (2022, GWh)	20,446
Peak demand sent out (2022, MW)	4,010
Available capacity sent-out (2022, MW) *	5,796
Electrical energy consumption per individual (2022, kWh)	1,821
Contribution of indigenous sources to electricity generation (2022, %)	32
Total installed RE capacity (including net metering and wheeling) (2022, MW)	2,577 (1,498 of IPPs, 1,079 of Net metering and wheeling)
Electrification/coverage rate (2022, %)	99

*Nominal available capacity is significantly higher than the actual available capacity due to the presence on the system of a number of ageing plants with poor availability and actual capacity that has been downgraded to well below nominal

- The Jordanian power sector sustained growth in recent years of both aggregate and peak demand, as set out below. NEPCO forecasts that total generation and peak demand will continue to grow at similar rates until 2040, reaching 36,610 GWh and 5,360 MW respectively. Peak demand in 2022 reached 4,010 MW, which was the highest to be recorded in the Kingdom's history, and second highest peak load Y-o-Y growth since 2016 (2019-2020 was slightly higher).

Demand	Units	2017	2018	2019	2020	2021	2022	5yr historic CAGR
Peak demand	MW	3,320	3,205	3,380	3,630	3,770	4,010	3.84%
Electrical Consumption	GWh	17,504	17,532	18,391	18,863	19,281	20,446	3.16%

- The Jordanian power sector is fully unbundled and substantially privatised. Key stakeholders include:

Stakeholder	Description
Transmission - NEPCO	<p>NEPCO owns and operates the Jordanian transmission network, which comprises 1,540 km of 400 kV transmission lines, 3,890 km of 132kV lines and 14,689 MVA of substation capacity up until the end of 2022.</p> <p>Interconnectivity:</p> <ul style="list-style-type: none"> - Egypt: via a 400 kV single circuit submarine cable at Aqaba - Syria: via a 400 kV single circuit OHL from Amman North substation to Syria. - Palestine: via a 132 kV Jordanian-Palestinian interconnection (Jericho area) - Iraq: via a 400KV Jordanian-Iraqi interconnection, first phase was commissioned, upgrades are envisioned until interconnection capacity reaches 1,000MW.

	- KSA: Technical and economic studies complete.
Generation	Jordan's electricity generating capacity is mostly fossil fuelled, with c. 1,498 MW of renewable IPP capacity as of 2022, two small hydropower plants, and several large wind farms, and utility scale PV power plants. As of the end of 2022, Jordan had 5,796 MW of installed capacity.
Distribution	Jordan has three distribution companies serving 2.2 million consumers. These include: <ul style="list-style-type: none"> - Jordan Electric Power Company (JEPCO), serving Amman and the surrounding areas, which account for c.64% of consumption. JEPCO is listed on the Amman Stock Exchange (ASE). - Irbid District Electricity Company (IDECO), serving northern Jordan, which accounts for c.24% of consumption. IDECO was privatised in 2008 and is now owned 55.4% by Electricity Distribution Company (EDCO), which is in turn majority owned by the Jordanian Social Security Investment Fund. - EDCO, serving southern and eastern Jordan, which accounts for c.12% of consumption. Like IDECO, EDCO was privatised in 2008 and is now owned 100% by Kingdom Electricity Company, which is in turn majority owned by the Jordanian Social Security Investment Fund.
Regulator - EMRC	The EMRC is managed by a council of five commissioners, appointed by the government via a recommendation of the Prime Minister. Each commissioner serves for a four-year term renewable once.

- The sector faced several challenges over the last decade, both on the supply and demand sides, mainly due to the Arab Spring/regional turmoil. With the influx of Syrian refugees into the country, energy demand had grown considerably between 2011 and 2016, and has subsequently levelled since then mainly driven by low economic growth. Demand between 2011 and 2022 grew at a CAGR of 3.2%.
- On the supply side, Jordan has long relied on energy imports to supply its power plants, mainly subsidised Egyptian natural gas. From 2011, disruptions in the Arab Gas pipeline made Egyptian gas supply unreliable and forced the country to shift to more expensive heavy fuel oil (**HFO**) and diesel for generation. [REDACTED].
- To secure the supply of natural gas needed for the production of electricity, the Government of Jordan imported LNG to the port of Aqaba as an alternative for the expensive HFO and diesel, and then signed an agreement for the supply of Jordan with natural gas from the Mediterranean, which currently covers most of Jordan's needs for conventional electricity generation.
- As of 2023, renewable energy accounted for c. 27% of the total generation capacity connected to the grid.

5. FINANCIAL ANALYSIS

5.1 FINANCIAL PROJECTIONS

[REDACTED]

5.2 SENSITIVITY ANALYSIS

[REDACTED]

5.3 PROJECTED PROFITABILITY FOR THE BANK

[REDACTED]

6. OTHER KEY CONSIDERATIONS

6.1 ENVIRONMENT

TRANCHE 1 – SUBSTATION

Categorised B (ESP 2019). The construction of the new 400kV high voltage substation in the North-Eastern part of Jordan will help reduce transmission losses, reduce curtailment of renewable energy generation, and facilitate the connection of additional renewable energy capacity in the future. NEPCO is an existing client of the Bank and is the recipient of an ongoing E&S support TC since 2019 to strengthen their internal resources and corporate systems to be in line with EBRD's E&S Performance Requirements. Environmental and Social Due Diligence (ESDD) has been concluded on the substation component of the Project by independent consultants. The ESDD involved a documentation review, meetings with NEPCO's relevant departments and site visits to the Rehab substation. The associated power lines are part of the second tranche, which constitutes an A category Project. Subsequently an ESIA has been prepared to international standards, and the substation component is also referenced in this ESIA.

The Project is located on a privately-owned, vacant land with no existing structure and limited land use activities. The area around the site is also vacant with only sporadic agriculture or grazing activities.

ESDD confirmed that the construction of the substation will not result in any physical or economic resettlement. However, the area needed for the Project is owned by 172 persons; and considering this is a public benefit project, NEPCO proceeded with an urgent expropriation process that is in line with national law. The ESDD consultants have assessed that land acquisition and compensation process undertaken is not fully aligned with PR5 requirements in terms of the land valuation and PAPs consultation processes. EBRD has therefore commissioned an audit of the past land acquisition undertaken, with corrective measures identified to be included in a Corrective Action Plan (CAP) that will be agreed with the Company and covenanted. The development and acceptance of this CAP is a CP to first disbursement.

The site does not cross nor is it close to any biodiversity or cultural heritage sensitive areas. A specific SF6 monitoring management plan will be developed to identify and promptly manage SF6 leakage.

The corporate audit demonstrates NEPCO's overall alignment with international standards, demonstrated by Quality, Environmental, and Occupational Health and Safety Management Systems certified to ISO 9001, 14001, and 18001. The dissemination of the supporting procedures of those needs to be strengthened, and an update of the systems is also due including Human Resources and Contractor management arrangements. The E&S TC consultants will work with NEPCO to build their capacity and to bring the existing procedures in line with best practice and the Banks PRs.

The Human Resources policy and procedures, already in place at the corporate level, including workers grievance mechanism, will be cascaded to employees, contractors, and subcontractors of the Project. The Company will be required to develop a Health & Safety policy covering both workers and communities, and an Occupational and Community Health and Safety Plan. Emergency responses procedures will also be prepared. A framework for regular HSSE audits of the Contractor and subcontractors against Management Plans and corporate standards will be developed by NEPCO, included in the management system, and implemented for the Project. Any temporary worker accommodation will need to comply with the IFC-EBRD worker accommodation guidelines (2009).

A Stakeholder Engagement Plan and a Non-Technical Summary have also been prepared and been published in both Arabic and English. These documents cover and cross-reference the associated overhead power lines Project to be financed by the Bank under Tranche 2. The ESAP was also finalized and agreed with the Company and includes requirements relating to land acquisition, the development of detailed E&S management plans and contractor monitoring procedures. A TC-funded consultant

dedicated to ESAP implementation support will be provided to NEPCO to ensure that the project is implemented according to Bank's PRs. The ESAP and CAP of the Project, as well as NEPCO E&S performance, will be monitored by external consultants reporting to EBRD on a bi-annual basis.

TRANCHE 2 – OVERHEAD TRANSMISSION LINES

Categorised A (2019 ESP). The Project involves the development of 4 Overhead Transmission lines, including a double circuit greenfield 400 kV, and may be associated with various E&S risks. The Project has undergone a comprehensive ESIA preparation process, including several public consultations. The development of the ESIA was closely monitored by the Bank, and the ESIA package, inclusive of Non-Technical Summary (NTS), Stakeholder Engagement Plan (SEP), Resettlement Framework (RF) will be disclosed (including ESAP) on the Bank and Company's website for a 120-day consultation period in line with the Bank's Access to Information Policy prior to Board considerations.

The Environmental permit will be issued once micro-alignment is decided by the EPC contractor, and the current ESIA is updated as per the national authorities' requirements. An associated facility, the 400kV substation has been covered under Tranche 1 of EBRD financing and is cross-referenced in this Project. The NTS and SEP cover both Tranches.

E&S Management and monitoring plans (ESMMPs) have been prepared for the construction and operation phases of the Project. They include the mitigation measures outlined in the ESIA and ESAP, with implementation responsibilities covering the Borrower, EPC Contractor and subcontractors.

The Company will be required to appoint dedicated E&S resources for the Project and maintain adequate capacity to implement and monitor the Management Plans during construction and operations.

Overall, the Project will not be associated with high pollution or resources use and these will be managed by the corresponding management plans. Specific provision for waste management and spill response have been prepared to mitigate the risks of contamination of the water bodies along the route or underground waters. Traffic and noise management plans will be prepared and implemented during construction. Electromagnetic field exposure will be regularly monitored during operation and mitigation measures shall be implemented in case of exposure above standards as per the ESAP.

The provisional route of the OHTLs passes through private land which may result in some economic displacement. A Resettlement Framework (RF) has therefore been prepared as part of the ESDD, to ensure the land acquisition and compensation process is undertaken in line with PR5. The Framework has been agreed by NEPCO and will be publicly disclosed. The provision of a detailed Resettlement Plan will be covenanted, and its implementation will be supervised by independent consultants.

Several archaeological sites have been identified in the vicinity and along the proposed route of the OHTL. Consultations with the competent authority have been carried out and final design will avoid any such sites. A chance find procedure will also be developed and implemented in close concertation with the relevant authorities.

The Project will have limited impact on biodiversity and the Critical Habitat Assessment confirmed that no key biodiversity will be affected. Additional biodiversity surveys will be undertaken once the final alignment is confirmed, and specific measures will be implemented through the ESMMPs to further mitigate residual risks of disrupting biodiversity. This includes installation of bird diverters and monitoring of avifauna in line with GIP during operation.

A Stakeholder Engagement Plan (SEP), including external grievance mechanism, has been prepared and disclosed for the Project. NEPCO will appoint Community Liaison Officers to manage the implementation of the SEP, related ESAP items and external grievance. The Plan will be amended as necessary throughout the lifetime of the Project. The Company will be required to disclose publicly information of the E&S performance of the Project. The ESAP is finalised and agreed with the Company and includes requirements relating to land acquisition, the development of detailed E&S management

plans and contractor monitoring procedures. A TC-funded consultant dedicated to ESAP implementation support will be provided to NEPCO to ensure that the project is implemented according to Bank's PRs. The ESAP and overall E&S performance of the Project will continue to be monitored by external consultants reporting to EBRD on a bi-annual basis.

6.2 INTEGRITY

In conjunction with OCCO, updated integrity due diligence was undertaken on NEPCO, 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, all required documentation which have been properly and accurately completed to proceed with the Project have been filed.

6.3 OTHER ISSUES

CONCESSIONAL FINANCE

The considered investment in the new high voltage transmission substation will help in (i) reducing curtailment of surrounding renewable energy generation, (ii) increase dispatching flexibility, and (iii) reduce emissions. [REDACTED].

ANNEXES TO OPERATION REPORT

ANNEX 1	Shareholding structure
ANNEX 2	Green assessment
ANNEX 3	Project implementation
ANNEX 4	Project location
ANNEX 5	SSF Fiche

ANNEX 1 – SHAREHOLDING STRUCTURE

**Government of Jordan
(Ministry of Finance)**



Owns 100%



شركة ادارة الاستثمارات الحكومية
GOVERNMENT INVESTMENTS
MANAGEMENT COMPANY

Owns 100%



ANNEX 2 – GREEN ASSESSMENT

SUMMARY

- The Projects involve the construction of a 400kV substation and high voltage OHTL, which help in evacuating existing renewable energy generation, reducing transmission losses and adding capacity for future renewable energy projects.
- The Project is determined **aligned with both mitigation and adaptation goals of the Paris Agreement**.
- The Projects are attributed 100% **GET**.

PARIS ALIGNMENT ASSESSMENT

Alignment with the mitigation goals of Paris Agreement - General screening

The project is determined as aligned with the mitigation goals of the Paris Agreement based on the application of the Bank's Paris alignment approach for direct finance.

- The projects activities are included in the 'MDBs' aligned list' under the category "Electricity transmission and distribution, including energy access, energy storage and demand-side management".
- There are no activities included in the 'non-aligned list'.

Alignment with the adaptation goals of Paris Agreement

The projects are determined as aligned with the adaptation goals of the Paris Agreement as they satisfy all three steps of the assessment. No material physical climate risks have been identified.

- Step 1: The screening performed under Step 1 indicates that the projects face potentially material physical climate risks.
- Step 2: During the due diligence phase these risks were further assessed, and the results summarised below.

Hazards	Materiality		Climate resilience measures
	Exposure	Sensitivity	
First Tranche– Substation			
- Extreme heat event	Probable	High	The expected summer time maximum temperature (under climate change) is 46.4 °C (2.5 degrees anomaly over historical baseline). The substation equipment is designed for a maximum air temperature of 50 °C, and therefore are expected to cope with the extreme temperature projections.
Second Tranche – Overhead Transmission Line			
- Extreme heat event	Probable	High	The expected summer time maximum temperature (under climate change) is 46.4 °C (2.5 degrees anomaly over historical baseline). The overhead line is designed for a maximum air temperature of 50 °C, and therefore is expected to cope with the extreme temperature projections.
- Flood	Probable	High	The surface water dynamics in the project area, are predominantly characterised by intermittent flows in wadis, which are dry riverbeds that become active during and immediately after rainfall events. Clear actions have been identified in the ESIA to manage this risk that will result in the following: <ul style="list-style-type: none">• Undertake flood risk assessment and hydrodynamic analysis during the design phase.

			<ul style="list-style-type: none"> • Conduct a detailed assessment employing high-resolution topographic data, Digital Elevation Models (DEMs), GIS for spatial analysis, and advanced hydrological modelling techniques such as the use of HEC-RAS or 2D hydrodynamic models to simulate flood behaviour and predict flood impact zones and flow velocities accurately. • Implement slope stabilisation techniques at substation and other vulnerable areas to stabilise soil and reduce erosion. • Tower siting shall avoid the wadi and flood risk areas and shall apply required engineering measures to divert potential flood from the substation. • No towers within 10 meters of water bodies. • Undertake a rigorous scrutiny and assessment of the infrastructure within this catchment area • Where construction near wadis is unavoidable, ensure structures are built on elevated foundations to minimise flood impact. • Establish buffer zones around wadis and other high-risk flood areas to maintain natural hydrological processes and protect infrastructure <p>These actions will be monitored in the ESAP, through the following:</p> <ul style="list-style-type: none"> • The EPC Contractor is required to coordinate with NEPCO to provide the final detailed design to ensure they are aware of hydraulic designs required to be implemented for the Project and the associated costs. • Inspection for flood control and erosion and runoff control to include inspections for implementation of mitigation measures.
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- Step 3: The Project is unlikely to have an impact on the climate resilience of the wider system in which it operates.

GET ATTRIBUTION

The Projects are attributed 100% GET. This share has been calculated in line with the criteria: “Greenfield transmission or distribution of electricity that supports delivery of non-nuclear, very-low-carbon electricity”. The new substation and transmission line will help reduce the energy losses of the transmission system, will reduce curtailment and support the addition of the new renewable energy capacity planned for 2027-2030.

Impacts:

- Increase flexibility of transmission network leading to losses reduction: 179.14 GWh pa / 68,407 tCO₂eq pa (Scope 2)
- Curtailment avoided: 303 GWh pa / 143,489 tCO₂eq pa (Scope 3)
- Renewable energy capacity planned for 2027-2030 facilitated: capacity: 600MW / energy yield: 1.5 GWh pa / GHG emissions reduction of 746,712 tpa (Scope 3)

The impacts between the two tranches have been pro-rated based on the capex.

[REDACTED]

ANNEX 3 – PROJECT IMPLEMENTATION

Procurement classification – *Public sub-sovereign*

Project risk assessment:

[REDACTED]

Contracts risk assessment – High

The Project will include four contracts: The first works contract pertains to “*the construction of a 400kV high voltage transmission substation in the North-Eastern part of Jordan including Civil works & switchgears*”. The second is a goods contract for “*the construction of a 400kV high voltage transmission substation in the North-Eastern part of Jordan to–purchase transformers, reactors and related services for which the contract risk is assessed as high because it deals with multi-technical aspects. The third works contract includes “the construction of a 400kV high voltage transmission substation in the North-Eastern part of Jordan and will have 3 lots”. The fourth contract is for hiring a “PIU Support & construction supervision consultant”. The contract risk is also high as the consultant will be responsible to support the Client with the procurement and implementation of the whole Project.*

Project implementation arrangements:

NEPCO will be responsible for the overall project implementation, and will be required to establish a PIU. NEPCO’s PIU will be assisted by a qualified PIU Consultant for the project preparation phase, including the preparation of tender documents and complete tendering process for Bank-financed contracts under the Project. The PIU & Supervision consultant will be responsible to transfer the knowledge to NEPCO professional staff, allocated for day-to-day work together with the consultant. The PIU Consultant will also assist NEPCO with supervision and monitoring of the project implementation until Project Completion.

Procurement arrangements:

The Project is classified as a public sector operation for procurement purposes. All contracts under the Project will be procured following an open tendering procedure in accordance with the requirements of the Bank’s Procurement Policies and Rules (PP&R) for public sector operations.

All contracts are financed by the Bank's loan and an EU NIP grant. They will be procured using the Multi – stage open tendering procedure in accordance with Section III, Article 3 of the PP&R, and will use the Bank’s Standard Procurement Documents and FIDIC Yellow book contract conditions for the Works contracts.

The Project will use “Advance Procurement” procedures for tendering of the PIU Support & Construction Supervision” and “the construction of a 400kV high voltage transmission substation in the North-Eastern part of Jordan” once the preparation of the Project is sufficiently advanced as per Article 3.76 of the PP&R to allow for a most efficient implementation.

The consultancy services including PIU support & Construction Supervision will be procured using a competitive procedure for single- stage open tendering procedure (with Prequalification). The remaining TC will be procured using a competitive procedures using one stage tendering procedures in accordance with Section III, Article 3 of the PP&R and will use the Bank's Standard Procurement Documents.

All contracts procured under PP&R will be subject to prior review by the Bank. All tenders will be managed using the EBRD Client Electronic Procurement Portal (ECEPP). [REDACTED].

ANNEX 4 – PROJECT LOCATION

The proceeds will be used to build the new North Substation in the Rihab area located around 61 km North-East of Amman, Jordan. Location shown in the figure below.

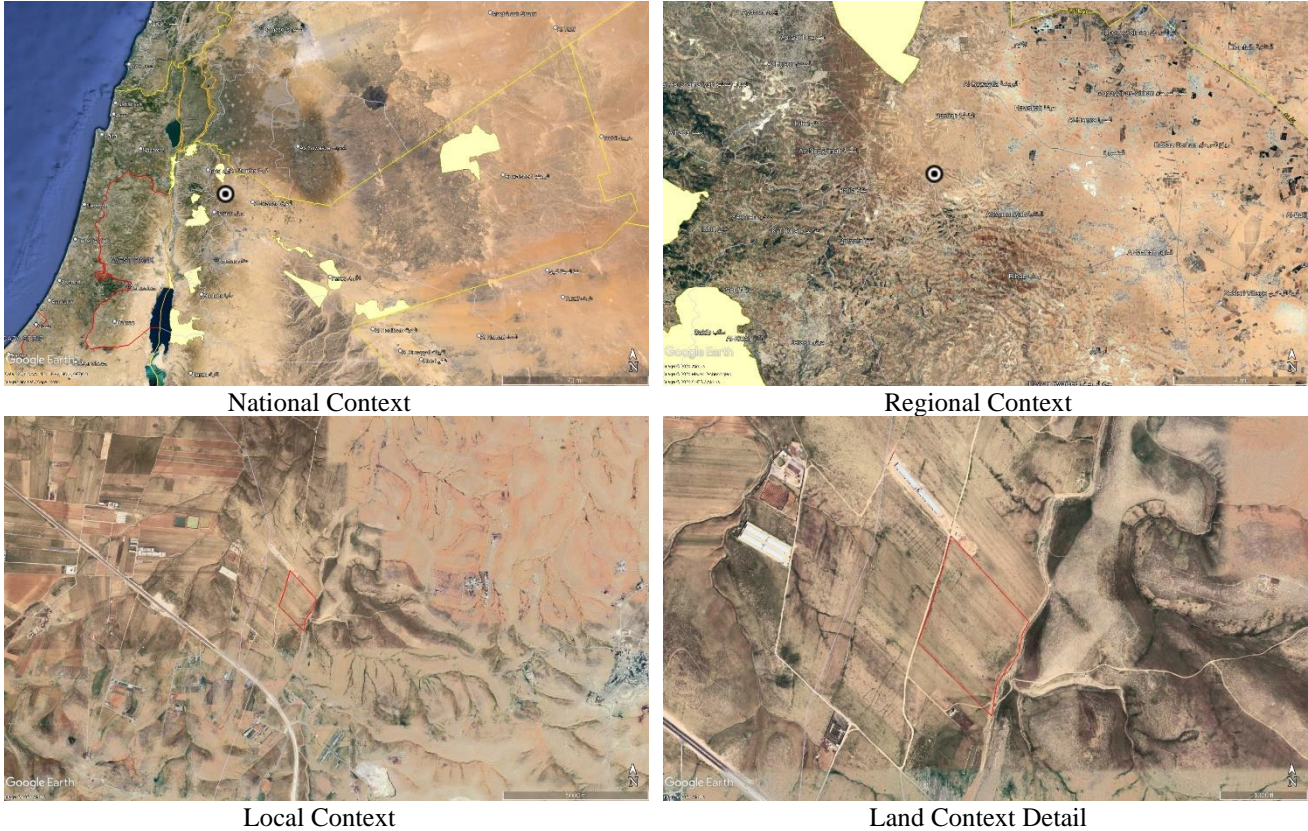


Figure 1: Project Location Contextual Overview from National to Local Scale

In addition, the Project involves include an overhead transmission line (OHTL). NEPCO provided a provisional route for the OHTL that starts from Al-Hashimeyeh area in Zarqa Governorate and passes through several districts and localities and ends at the selected location for the North Substation in Rihab locality. The 400 kV North Substation will be connected to the 400 kV transmission line (Al Samra - West Amman) on the 400 kV side, in addition to connecting with the Al Hassan Industrial Estate and Jerash 132/33 kV substations on the 132 kV side. The OHTL provisional route provided by NEPCO is shown in the figure below.

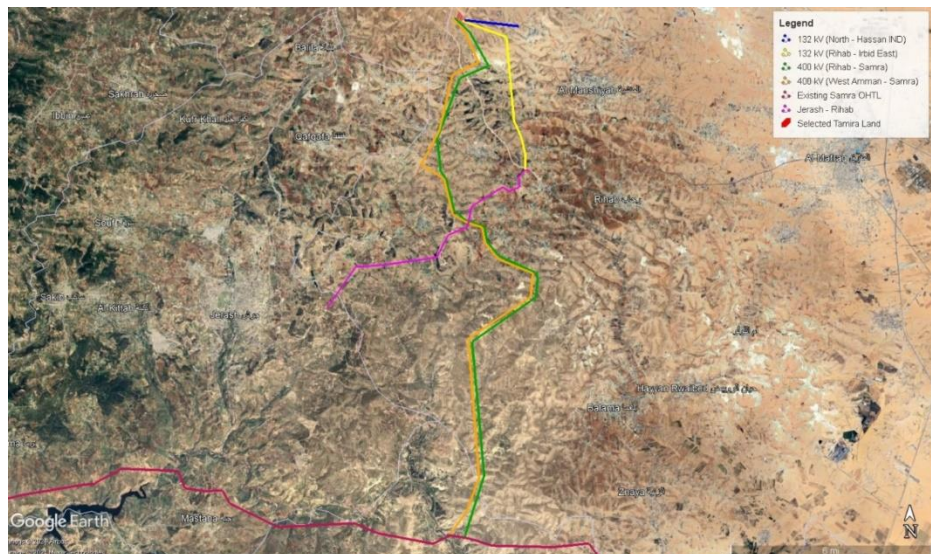


Figure 2: Provisional Route Provided by NEPCO for the OHTL

ANNEX 5 – SSF FICHE

[REDACTED]