DOCUMENT OF THE EUROPEAN BANK
FOR RECONSTRUCTION AND DEVELOPMENT

Approved by the Board of Directors on 21 October 2020[1]

JORDAN

VISP - NEPCO: LIQUIDITY FACILITY

[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.

TABLE OF CONTENTS

Page

ABBREVIATIONS

ABC	Anti-bribery and Corruption
AFD	Agence Francaise de Développement
AGC	Automated Generation Control
AGP	Arab Gas Pipeline
ASE	Amman Stock Exchange
BDS	Board of Director Series
BOO	Build-Own-Operate
Bps	Basis points
BST	Bulk Supply Tariff
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CCGT	Combined Cycle Gas Turbine
CEGCO	Central Electricity Generating Company
CFADS	Cash Available for Debt Service
CGAP	Corporate Governance Action Plan
CO2	Carbon Dioxide
COD	Commercial Operations Date
COP21	2015 United Nations Climate Change Conference
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortisation
EDCO	Electricity Distribution Company
EMRC	Electricity and Minerals Regulatory Commission
EPC	Engineering, Procurement and Construction
EPP	Enforcement Policy and Procedures
EOAP	Equal Opportunity Action Plan
ESAP	Environmental and Social Action Plan
ESDD	Environmental and Social Due Diligence
ESIA	Environmental and Social Impact Assessment
ETC	Electrical Training Centre
EUR	Euro
EURIBOR	Euro Interbank Offered Rate
FX	Foreign Exchange
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GET	Green Economy Transition
GHG	Greenhouse Gases
HFO	Heavy Fuel Oil
IDC	Interest During Construction
IDECO	Irbid District Electricity Company
IFC	International Finance Corporation
IFRS	International Financial Reporting Standard
IMF	International Monetary Fund
IPP	Independent Power Producer
JREEEF	Jordan Renewable Energy and Energy Efficiency Fund
JEPCO	Jordan Electric Power Company
JOD	Jordanian Dinar
KEPCO	Korea Electric Power Corporation
Km	Kilometres
KPI	Key Performance Indicator
kV	Kilovolt
LIBOR	London Inter-Bank Offer Rate
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
MEMR	Ministry of Energy and Mineral Resources
MMBTu	Million British Thermal Unit

MOF	Ministry of Finance
MoL	Ministry of Labour
MoU	Memorandum of Understanding
MVA	Megavolt Ampere
MW	Megawatt
NEPCO	National Electric Power Company
NTS	Non-Technical Summary
O&M	Operations and Maintenance
OHL	Overhead Line
OPEX	Operation Expenditure
OPIC	Overseas Private Investment Corporation
PIU	Project Implementation Unit
PP&R	Procurement Policies and Rules
PPA	Power Purchase Agreement
PPP	Purchasing Power Parity
PR	EBRD Performance Requirements
PSD	Project Summary Documents
PV	Photovoltaic
REEEL	Renewable Energy and Energy Efficiency Law
SECO	Swiss State Secretariat for Economic Affairs
SEP	Stakeholder Engagement Plan
SEPCO	Samra Electric Power Company
SME	Small and Medium Enterprises
SOE	Stated-owned enterprise
SSF	Shareholder Support Fund
TC	Technical Cooperation
TCA	Transmission Connection Agreement
TCO2e	Tonne of Carbon Dioxide Equivalent
TOE	Tonne of Oil Equivalent
USAID	United States Agency for International Development
USD	United States Dollar

CURRENCY CONVERSIONS

EUR / USD	0.85 (as of 09/09/2020)
USD / JOD	1.41(as of 09/09/2020)

WEIGHT AND MEASURES

Giga	109
Kilo	103
Mega	106
T, t	Metric tonne
Megawatt (MW)	1,000 kilowatts (103 kW)
Gigawatt (GW)	1 million kilowatts (106 kW)
Megawatt-hour (MWh)	1,000 kilowatt-hours (103 kWh)
Gigawatt-hour (GWh)	1 million kilowatt-hours (106 kWh)

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 facility will consist of a sovereign-guaranteed loan to the Company in the amount of up to USD 100 million (c. EUR 84.7 million). The loan will be guaranteed by the Hashemite Kingdom of Jordan represented by its Ministry of Finance.

The operation, presented under the Vital Infrastructure Support Programme (under the EBRD COVID-19 Solidarity Package, will provide emergency liquidity to help NEPCO address working capital constraints in the context of the COVID-19 crisis. More specifically it will replace short-term debt financing borrowed at the peak of the crisis to finance payments due to renewable energy generators with term financing.

NEPCO is Jordan's single buyer of electricity, transmission system operator and dispatcher. Its financial stability is essential for the smooth functioning of the power sector in Jordan. As the purchaser of utility-scale renewable energy it is also the central entity responsible for the extraordinary growth of wind and solar power in Jordan in recent years.

By supporting NEPCO to maintain a stable supply of vital infrastructure services during a crisis period, the expected transition impact of the Project will arise primarily from support to the Resilience of the Jordanian electricity sector. It will also support the restoration of stability and payment discipline to the renewable sector, which is vital for its long-term credibility.

In addition the Bank will take this opportunity to support longer-term objectives, notably in relation to Inclusion, through a set of initiatives focused on the promotion of career opportunities for women and young professionals in the sector.

TC support for this operation is expected to be funded by SECO and the EBRD Shareholder Special Fund.

I am satisfied that the operation is consistent with the EBRD COVID-19 Solidarity Package, the Bank's Strategy for Jordan as (i) it will contribute to the improved performance, service delivery and sustainability of the electricity infrastructure and (ii) it will enhance vocational training and skills development for youth and women. It is also consistent with the Energy Sector Strategy, the Economic Inclusion Strategy, the Strategy for the Promotion of Gender Equality 2016-2020and with the Agreement Establishing the Bank.

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

Jürgen Rigterink
Acting President

BOARD DECISION SHEET

Jordan – VISP NEPCO: Liquidity Facility - DTM 52010	
Transaction / Board Decision	Board approval[2] is sought for a sovereign-guaranteed loan of up to USD 100 million (EUR 84.7 million eq.) to National Electric Power Company ("**NEPCO**"), a public shareholding company incorporated in Jordan, in order to support its emergency liquidity needs. The Government of Jordan, represented by the Ministry of Finance ("**MoF**" or the "**Guarantor**"), will provide a sovereign guarantee.
Client	NEPCO, a public shareholding company fully owned by the Government of Jordan through the [Government Shareholdings Company]. [3]
Main Elements of the Proposal	• **Transition impact** Primary Quality - Resilient: the Project will provide NEPCO with critical liquidity support to address the working capital challenges arising from the COVID-19 crisis. Secondary Quality - Inclusive: the Project will include (i) a policy dialogue with the Ministry of Labour and the energy regulator to develop the certification of electrical technicians and specialists and (ii) the development of an apprenticeship programme with a local technical university. NEPCO will also be supported in reaching higher gender diversity standards and managerial capacity building for career progression. • **Additionality** There is limited availability of funds from commercial banks in the Jordanian market. Other DFIs are not positioned to provide this form of emergency support. • **Sound banking** NEPCO's financial situation is challenging but it has a consistent track record of honouring its obligations based on its key role as a public utility. Further mitigation is provided by the sovereign guarantee.
Key Risks	**Credit Risk:** NEPCO's financial situation is challenging and it will take some time to reach financial sustainability. Mitigation: NEPCO is an SOE that operates as a natural monopoly with sustainable revenue and the loan has a sovereign guarantee. **Management Risk**: Under the Bank's first project with NEPCO (OpID 50034) the Bank has identified several gaps related to the Company's organizational efficiency. Mitigation: the implementation of the comprehensive Corporate Reform Roadmap agreed with the Company in December 2018 is well underway. **Political Risk:** The region is undergoing significant political turmoil and the country experienced a lockdown due to the COVID-19 virus. Mitigation: Jordan has a history of security and stability in the region. Jordan's rapid and strict lockdown appears to have been effective in limiting the spread of the virus. The Central Bank of Jordan and the government have also undertaken several actions to stimulate the economy and minimize the negative impact of the lockdown on businesses and individuals.
Strategic Fit Summary	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 Economic Inclusion Strategy and the Strategy for the Promotion of Gender Equality 2016-2020.

2 Article 27 of the AEB provides the basis for this decision.
3 The legal name of this entity is Government Investment Management Company.

ADDITIONAL SUMMARY TERMS FACTSHEET

EBRD Transaction	Up to USD 100 million (EUR 84.7 million), sovereign-guaranteed loan to NEPCO, a company fully owned by the government of Jordan.
Existing Exposure	Direct exposure to NEPCO with a sovereign guarantee: EUR 226m loan (OpID 50034) with EUR 170m operating assets as of August 2020. Indirect exposure to NEPCO: in the case of all but two Jordanian power sector projects financed to-date by EBRD (OpID 50034 - NEPCO Restructuring Loan and OpID 50371 Kawar/Orange Project), the borrowers have offtake agreements signed with NEPCO, backed by a sovereign guarantee. The exposure to those projects is EUR 326.2m, of which EUR 325.7m in disbursed operating assets as of August 2020. Other exposure to sovereign in Jordan: in addition to the existing NEPCO loan, the Bank has four sovereign-backed loans in the Infrastructure sector in Jordan, comprising Water and Sewage Systems, and Waste Management and Remediation Services with a total EBRD exposure of EUR 68.2m, and operating assets of EUR 11.4m (OpIDs 47495, 47767, 48496, 47046) as of August 2020.
Maturity / Exit / Repayment	[REDACTED] seven-year tenor [REDACTED]
Use of Proceeds	The proceeds of the loan will be used to refinance short-term debt financing borrowed by NEPCO during the COVID crisis (drawn by the time of the Bank's loan disbursement) to cover NEPCO's working capital needs, specifically payment due to renewable energy producers. The refinanced short-term credit lines will be identified in the loan documentation.
Financing Plan	[REDACTED]
Key Parties Involved	Borrower: NEPCO Guarantor: Government of Jordan, as represented by Ministry of Finance.
Conditions to subscription / disbursement	[REDACTED] 1. Terms of reference for the three Inclusion TCs agreed with NEPCO; 2. Implementations of certain [REDACTED] actions included in the corporate reform roadmap agreed as part of the 2018 loan to NEPCO ("**Roadmap**") as shown in Annex 4.
Key Covenants	Implementation of the Inclusion TCs. Implementation of the Roadmap and the related corporate governance action plan (CGAP).
Security / Guarantees	Sovereign guarantee.
Other material agreements	A guarantee agreement will be entered into between the Bank and the MoF (the "**Guarantee Agreement**"), backing the obligations of the Borrower.
Associated Donor Funded TC and co-investment grants/concessional finance	The Project includes the following TCs [REDACTED]: Post-signing: • Inclusion TC 1: Support to Ministry of Labour and EMRC in the introduction of regulatory framework for the certification of electrical technicians and specialists; and to NEPCO's Electrical Training Centre (ETC) to formalise an apprenticeship arrangement with a local technical university: [REDACTED]. • Inclusion TC 2: Assist the Company in enhancing career opportunities for women and young professionals and improve flexible work arrangements through adoption of an Equal Opportunities Action Plan: [REDACTED].

	• Inclusion TC 3: Managerial capacity building, including a gender component: [REDACTED]. • Internal Audit's functional improvement & development and operational facilitation: Support NEPCO to strengthen its internal audit function in line with the requirements stated under the CGAP: [REDACTED]. Cost sharing**:** The Company will provide in-kind support in the form of office space, communication connections, etc., for the consultants to work [REDACTED].

[REDACTED]

INVESTMENT PROPOSAL SUMMARY

1. STRATEGIC FIT AND KEY ISSUES

1.1 STRATEGIC CONTEXT

NEPCO and the Jordanian energy sector

Jordan's energy sector was characterised until recently by a near total reliance on imported hydrocarbons, since Jordan has no substantial oil or gas reserves or hydropower capacity. This dependency resulted in a carbon-intensive energy sector and high vulnerability to supply shocks or commodity price volatility.

Since 2014 Jordan has embarked on one of the most ambitious renewable energy programmes of all the Bank's countries of operations. A well-structured contractual framework, based on a pre-existing framework used for thermal power plants, has resulted in more than 20 private, wind and solar projects either in operation or construction delivering 1,400 MW of capacity and 20% of total generation. Accordingly Jordan has substantially exceeded its renewable energy target of 10% of generated energy by 2020 and is now working towards its new target of 30% generation by 2030. The attractiveness of this framework, and the outstanding renewable resources, mean that the most recent renewable tariffs are below the cost of conventional generation. As a consequence Jordan is a model for other SEMED countries looking to develop their own renewable sector, including Egypt and Tunisia.

The state-owned National Electricity Power Company ("**NEPCO**") is the key actor in the energy sector. It owns and operates the electricity transmission system. It is the central offtaker for all utility-scale energy projects in the country, reselling the power to the three distribution and supply companies. It is accordingly a key contributor in the ongoing reform of the sector.

The Bank has been closely involved in the energy sector since starting operations in Jordan in 2012, and has to date supported 12 wind and solar projects and two thermal projects, all private, with USD 390 million of financing. NEPCO has naturally been a key counterparty for the Bank in these efforts. The Bank worked closely with NEPCO to develop the renewable energy framework and in 2018 took that cooperation further with a loan linked to a comprehensive corporate reform package.

COVID-19 pandemic and impact on NEPCO

The COVID-19 pandemic had a significant impact on the Jordanian power sector, causing notably:

(i) a sharp drop in electricity consumption due to the economic slowdown, estimated at around 10% which was not mirrored by the long term payment obligations that NEPCO is committed to under the long-term contracts with suppliers of electricity and gas;

(ii) a reduction in recovery of electricity sales by the distribution companies, which consequently led to an interruption in payments from the distribution companies to NEPCO for c. two months (from mid-March to mid-May 2020) and severe delays thereafter, with consequent severe impacts on NEPCO's operating cashflows [REDACTED].

As a result, NEPCO faced significant working capital constraints and was forced to begin delaying payments. In particular from April, NEPCO was only able to pay 75% of the amounts due to the renewable and conventional private independent power producers (IPPs) who provide almost all of Jordan's generating capacity. This threatened the stability of electricity supply in Jordan. It also could undermine the hard-won credibility of the contractual framework underpinning that sector. That in turn could jeopardise investor confidence in both Jordan as a destination for foreign direct investment and, given its position as a regional model, the renewable energy sector in SEMED.

The Bank has worked closely with NEPCO, the Jordanian authorities, investors and other IFIs to address this issue. Following those efforts NEPCO has reached an agreement with all renewable energy IPPs to return to full payment discipline promptly and to repay its arrears during the first half of 2021. NEPCO is finalising a similar agreement with conventional power producers, which will be reached prior to signing of the proposed loan. This is a critical step in restoring the investor confidence that is crucial given the scale of investment needed for Jordan and the region's ongoing green transition.

Proposed VISP emergency liquidity loan

The Bank's proposed USD 100 million loan responds to the acute liquidity pressure NEPCO is facing and is accordingly presented under the Vital Infrastructure Support Programme (VISP) approved as part of the Bank's Solidarity Package (the "**Project**"). *Annex 1* sets out in more detail the Project's alignment with the VISP. Specifically the Project will refinance short-term overdraft facilities incurred by NEPCO to allow it to continue making payments to private renewable energy producers in 2020. More generally it will provide NEPCO with liquidity support that allows it to continue to provide a stable electricity supply, avoiding a ripple effect of defaults throughout the sector. The Project also supports NEPCO in returning to full payment discipline towards renewable and conventional power producers. This is essential to avoid a damaging and persistent loss of confidence in the contractual framework which underpins the hitherto successful investment track record in wind and solar capacity in Jordan.

By ensuring that NEPCO remains financially stable the Bank will also support NEPCO's continued implementation of the corporate reform programme agreed in connection with its 2018 loan to NEPCO formalised by the Roadmap and related CGAP. That programme aims at a comprehensive restructuring of NEPCO's corporate governance and processes to make it a more modern and efficient utility. More details and progress to-date are in *Annex 4*.

In addition, the Bank is taking the opportunity presented by this loan to promote further reforms aimed at greater inclusion. In this way the Bank will leverage its support in a short-term crisis to promote long-term systemic reforms. It targets in particular the creation of more opportunities for youth and female employment through the following initiatives: (i) policy dialogue with the Ministry of Labour and the Energy and Minerals Regulatory Commission ("**EMRC**") to develop certification of electrical technicians and specialists, (ii) development of an apprenticeship programme at NEPCO with a local technical university, (iii) strengthening NEPCO's human resources (HR) policies and practices to improve opportunities for women and young professionals through the implementation of an Equal Opportunity Action Plan, and (iv) managerial capacity building for career progression.

DFI/IFI coordination

The Bank has consulted with all the leading DFIs and IFIs to coordinate its support for NEPCO. AFD and EIB, two current lenders to NEPCO, confirmed that they do not have additional capacity to provide further support NEPCO. OFID is considering support to NEPCO, in coordination with the Bank, under their specific crisis-response programme for up to USD 30 million. AIIB is also discussing potential support to NEPCO, but are not in a position to respond to the urgency NEPCO requires. The World Bank has been engaging with the Jordanian authorities on a number of fronts to ease the repercussions of the COVID-19 crisis and has pledged since the beginning of the crisis in March 2020 over USD 700m in budgetary assistance. Most recently in June 2020, the World Bank Group's Board of Executive Directors approved a USD 374 million project to provide cash support to 270,000 poor and vulnerable households. Given this focus the World Bank is not currently able to provide direct support to NEPCO or the energy sector. However the Bank's efforts to support NEPCO's financial stability and corporate reform are closely coordinated with the World Bank. More details on the activities of donors active in Jordan are provided in *Annex 9*.

Strategic alignment

The Project is aligned with Jordan's Country Strategy with a particular focus on the first two strategic priorities ("Promoting economic inclusion across sectors" and "Further developing sustainable municipal infrastructure and green energy").

The Inclusion elements of the Project are in line with the Economic Inclusion Strategy and the Strategy for the Promotion of Gender Equality 2016-2020. The Project's support for the long-term stability of the renewable energy sector in particular is well aligned with the Energy Sector Strategy 2019-2023.

1.2 TRANSITION IMPACT

Primary Quality: Resilient

Obj. No.	Objective	Details
1.1	*Stabilisation facilities for key infrastructure providers.*	In line with the VISP, the proceeds of the loan will be used to provide emergency liquidity [REDACTED]. Transition will be derived by creating resilience in the system by providing financial support to ensure the continuity of the vital services provided by NEPCO and ensuring that the capacity is maintained throughout and beyond the COVID-19 pandemic. It will support the sustainability of a key infrastructure service provider and help restore stability and credibility to the Jordanian IPP model which has underpinned its renewable revolution.

Secondary Quality: Inclusive

Obj. No.	Objective	Details
2.1	*The Project will introduce improved policy practices (e.g. market relevant skills standards)*	NEPCO will respond to the market's need for a new mechanism to qualify electrical technicians and specialists and, ultimately, ensure the safety of the systems and its workers. NEPCO will work with the national Energy and Minerals Regulatory Commission (EMRC), the Ministry of Energy and Mineral Resources, as well as the Ministry of Labour to introduce the necessary regulatory framework for the certification of specialists, while NEPCO's Electrical Training Centre (ETC) will introduce a new programme to train electrical technicians and specialists across the sector. The EMRC will be responsible for granting the final certification.

2.2	*The Project will introduce a new, replicable and accredited training programme (to equip [REDACTED] young people with higher skill levels) in cooperation with a local vocational school or university*	NEPCO will design, formalise and implement an apprenticeship arrangement between its ETC centre and the Bachelor programme in Energy Engineering of Al Hussein Technical University of the Crown Prince Foundation (HTU). Over the seven-year tenor of the loan, [REDACTED] young people will gain accredited market-relevant skills as part of this arrangement (including a minimum 25% of women). While HTU offers its expertise in designing modern curricula covering green and ICT skills for energy specialists, such as digital skills for remote control and monitoring of smart metering systems, NEPCO will offer the possibility of spending eight months at its sites to gain market-relevant skills. This arrangement will be accredited and students will receive three credits upon completion. This represents a substantial improvement in comparison to the short dual education programme previously offered by NEPCO and a best practice example in the context of Jordan.

1.3 ADDITIONALITY

Identified triggers	Description
*A subsequent/consecutive transaction with the same client/group either with the same use of proceeds or in the same country (**repeat transaction**).*	*The Bank is supporting NEPCO through a comprehensive restructuring project. This additional financing will help NEPCO navigate the exceptional circumstances experienced in 2020 to ensure the Company remains on track in its broader transformation.*
*A significant share (at least 30%) of the Project is to **finance working capital.***	*The loan will refinance some expensive short term financing taken by NEPCO during the COVID-19 crisis to cover for its working capital needs.*

Additionality sources	Evidence of additionality sources
Financing structure	Crisis response: EBRD financing **effectively bridges a financing gap** due to adverse market conditions. Public sector: EBRD investment is needed to close the funding gap. At the same time, EBRD does not crowd out other sources, such as from IFIs, government, commercial banks and/or complements them.
Risk mitigation	EBRD financing will be coupled with TC assignments including HR support which should eventually allow the Company to be better equipped to deal with external shocks such as the COVID-19 crisis, thus contributing to **mitigating non-financial risks**.
Standard-setting	The client seeks use of EBRD expertise on **higher inclusion and gender standards** and equal opportunities action plans. NEPCO will be supported in the review and improvement of its HR policies and practices, including the development of an Equal Opportunity Action Plan. With the Bank's support, NEPCO will identify new ways to introduce gender inclusion measures and foster women's access to employment and skills, including promoting gender-sensitive apprenticeship programmes, improving its flexible work arrangements and reviewing and extending its maternity and paternity leave schemes.

1.4 SOUND BANKING - KEY RISKS

Risks	Effect / Probability	Comments
Credit risk	Medium/ High	NEPCO's financial situation is challenging and it will take some time to reach financial sustainability. Mitigation: NEPCO is an SOE that operates as a natural monopoly with sustainable revenue and the loan has a sovereign guarantee.
Integrity risk	Medium/ High	The Bank's PP&Rs, which are the principal safeguards and controls for the Bank's operations in the public sector, will not apply and the proceeds will be paid to third party entities, being the financial institutions from which NEPCO had borrowed short term bridge financing. As such, some controls need to be in place. Mitigation: (i) The third parties (financial institutions) eligible to receive the Project's uses of proceeds will be pre-agreed prior to signing the Loan Agreement subject to EBRD integrity standards, (ii) the Loan Agreement will identify which short-term credit line(s) will be refinanced, and (iii) the Loan Agreement will state that EBRD proceeds cannot be used to pay any entity debarred by the Bank or on the UN Chapter 7 sanctions list and that no EBRD funding will be provided for contracts with an entity (a) that is owned or controlled by a PEP (as defined by FATF) or (b) is a related party (as defined by International Accounting Standard (IAS) 24 or (c) where there is an actual or apparent conflict of interest between the contracting parties.
Management risk	Medium/ Medium	Under the Bank's first project with NEPCO (OpID 50034) the Bank has identified several gaps related to the Company's organizational efficiency. Mitigation: the implementation of the comprehensive Corporate Reform Roadmap agreed with the Company in December 2018 is well underway. See *Annex 4* for more details.
Political risk	Medium/ Medium	The region is undergoing significant political turmoil and currently under lockdown due to the COVID-19 virus. Mitigation: Jordan has a history of relative security and stability in the region. In light of the ongoing global spread of the COVID-19 virus the government of Jordan laid out a set of measures including a nationwide shutdown. The Central Bank of Jordan and the government have also undertaken several action to stimulate the economy and minimize the negative impact of the lockdown on businesses and individuals.
FX risk	Low/ Low	The loan will be denominated in USD, while the revenues of the Borrower will be in JOD. Mitigation: the JOD is officially pegged to the IMF's SDR since 1995, though in practice it is pegged to the USD.
Interest rate risk	Low/ Low	The loan will be on a floating rate above six-month USD LIBOR, and are exposed to fluctuations in the base rate. Mitigation: the current level of USD LIBOR is very low which encourages NEPCO to fix its exposure (fixed rate estimated below 0.8% over

		the duration of the loan). The company already fixed half of its current USD exposure of USD 200 million with the Bank.

2. MEASURING / MONITORING SUCCESS

Overall objectives of project	*Monitoring benchmarks*	*Implementation timing*
- Ease cash flow pressures on NEPCO due to the COVID-19 crisis, and resume full payments to private producers; - Introduce a new programme to train and certify electrical technicians and engineers, as well as introduce a regulatory framework to formalise such a certification mechanism - Formalise a partnership with Al Hussein Technical University (HTU) and its Bachelor programme in Energy Engineering to introduce a new and accredited apprenticeship arrangement within the University for trainees to spend 8 months at its sites and gain market-relevant skills; - Adopt significant improvements in HR policies and practices in line with the Equal Opportunities Action Plan (EOAP).	- Resume full payments to IPPs with formalisation in an agreement; - Introduce a regulatory framework to formalise a certification mechanism for electrical technicians - Formalise a partnership with HTU and implement the apprenticeship arrangement; - Introduce improvements in accordance with the EOAP**.**	[REDACTED]

Benchmarks

Primary Quality: Resilient

Obj. No.	Monitoring indicator	Details	Baseline	Target	Duration
1.1	Operational restructuring completed	The Project involves functional improvements of the internal audit function to improve its operations in line with the international best practices, which will help NEPCO achieve the related item from the CGAP. This assignment will involve risk mapping, co-sourcing, structural review, audit planning, amongst other things.	[REDACTED]	[REDACTED]	[REDACTED]
1.2	Sales Turnover/Revenue of client	Recovery of revenues to pre-COVID-19 levels	[REDACTED]	[REDACTED]	[REDACTED]

Secondary Quality: Inclusive

Obj. No.	Monitoring Indicator	Details	Baseline	Target	Duration
2.1	Company engages in policy dialogue	NEPCO's Electrical Training Centre (ETC) will introduce a new programme to train and certify electrical technicians and specialists across the sector, in collaboration with the EMRC, the MEMR and the MoL	[REDACTED]	[REDACTED]	[REDACTED]
2.1	Legal, institutional or regulatory frameworks in target areas improved	NEPCO will contribute to the introduction of a regulatory framework to formalise the certification mechanism of the EMRC	[REDACTED]	[REDACTED]	[REDACTED]
2.2	Partnership between private sector and education providers established to support new learning opportunities	NEPCO will establish a partnership with Al Hussein Technical University (HTU) and its Bachelor programme in Energy Engineering	[REDACTED]	[REDACTED]	[REDACTED]
2.2	Tailored training programme developed and implemented	NEPCO's ETC will introduce a new and accredited apprenticeship arrangement with HTU for trainees to spend 8 months at its sites	[REDACTED]	[REDACTED]	[REDACTED]
2.2	Number of youth earning an accredited certification and enhancing their skills as a result of training	As part of this arrangement, [REDACTED] young people will gain market-relevant skills and attain accreditation, including a minimum 25% of women	[REDACTED]	[REDACTED]	[REDACTED]

3. KEY PARTIES

3.1 BORROWER

NEPCO is a 100% state-owned public shareholding company established in accordance with the General Electricity Law No. 10 (1996) on 1 September 1996 when the vertically integrated state-owned Jordan Electricity Authority was unbundled into five separate companies. NEPCO is licensed by 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 of the electricity generated by state-owned and IPPs, including utility scale RE projects, as well as from abroad through imports;
- dispatcher of power from all generating units connected to National Transmission System to the bulk-supply points of the distribution companies via the National Control Centre (at Amman South); and

- single purchaser of hydrocarbons for electricity generation.

Revenues: NEPCO receives revenues from the sale of electricity to the three distribution companies operating in Jordan, which responsibilities are geographically split, and from the sale of electricity directly to 12 large consumers. NEPCO also has minor revenues generated from cross-border interconnections with neighbouring countries, and the sale of gas to large industries. The distribution companies pay NEPCO the difference between the end-user tariff they have collected and the bulk supply tariff[4] (**BST**) they are entitled to receive based on a Regulatory Asset Base (**RAB**) methodology as approved by the 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 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 conventional power plants. This has led to severe pressures on NEPCO's operational performance, as its cash flows are exposed to commodity price fluctuations since historically fluctuations in the fuel price have not been passed through to end-users. See *Annex 5* for more details.

3.2 GUARANTOR

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

4. MARKET CONTEXT

Market background

- In 1996, the vertically integrated state-owned Jordan Electricity Authority was unbundled into five separate companies. The majority of generation is gas and oil-fired with all but one plant privately owned. The sector is overseen by the Ministry of Energy and Mineral Resources and regulated by the EMRC.
- The sector faced several challenges over the last decade, both on the supply and demand sides, which coincided with the Arab Spring. 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 2018 grew at a CAGR of 2.5% and is now expected to grow at the same rate moving forward. On the supply side, in the absence of indigenous hydrocarbon resources, 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. Given the political unrest in the region as well as economic and social pressures during the Arab Spring, the surging fuel costs could not be passed on to end consumers and resulted in significant losses for the sector.
- The Stand-By Agreement with the IMF in 2012 stipulated measures to address the sector's problems, including end-user tariff increases and energy diversification through developing

[4] For clarity, an alternative formulation of this phrase is: 'The distribution companies pay NEPCO the bulk supply tariff (**BST**) which is the difference between the end-user tariff they have collected and the tariff'.

RE and securing liquefied natural gas (LNG) imports. Gradual end-user tariffs increases were made and a fuel surcharge was introduced in 2016. The combination of tariff increases, the introduction of a fuel surcharge, and access to LNG to replace heavy fuel oil substantially improved NEPCO's financial situation. However, reforms remain incomplete and pressures persist.

- In response, the government launched an ambitious plan to explore the country's vast renewable resources built upon the Renewable Energy and Energy Efficiency Law (REEEL) of 2010. This attracted a wave of private investments on the basis of take-or-pay agreements, resulting in over 1,400 MW of private renewable capacity in construction or operation as at July 2020.
- Jordan also pursued exploiting other indigenous resources for power generation. Notably, a 370MW oil-shale fired plant is currently under construction.

<u>Recent developments – COVID crisis</u>

- In March 2020, a Royal Decree was issued announcing the implementation of the National Defence Law in the Kingdom in response to the spread of the COVID-19 pandemic. Later on, the Minister of Energy and Mineral Resources (MEMR) instructed distribution companies to refrain from disconnecting energy supply to non-paying customers, both residential and commercial, for a period of one month. The lockdown led to a drop in energy loads by around 10%, as reported by NEPCO, given the interruption of economic activity across the nation.
- In March 2020, Jordan and the IMF signed the new IMF-Support Program which is anchored on (i) structural reforms to stimulate job growth (including reduction of electricity costs), (ii) improve the fiscal situation, and (iii) respond to COVID-19 outbreak.
- On 21 May 2020, the IMF approved the government's request for USD 396m in emergency assistance under the Rapid Financing Instrument (RFI). The request came after the EFF extension was approved and in light of worsening economic conditions due to COVID-19, which requires a shift in government's priorities. However and despite expected delays in adhering to EFF arrangements, the government will continue to deliver on its commitments. One of the structural reforms anchoring the EFF program targets improvements in the electricity sector through (i) reforming tariff structure and (ii) securing NEPCO's financial sustainability.
- The government of Jordan has approved a record high borrowing cap of USD 622 million for the benefit of NEPCO, who approached all commercial banks to obtain medium term financing of up to USD 350m. [REDACTED].

<u>Impact on renewable energy projects</u>

- In relation to IPPs, during the second week of April, NEPCO issued force majeure notices to the RE producers informing them that they would only pay 75% of the undisputed amount of the bills related to February, with the remaining 25% to be paid at a later stage.
- After numerous discussions with developers and lenders, NEPCO and most of the RE developers signed a settlement letter confirming that full settlement will start in September 2020 (in relation to the July invoices) and that the 25% unsettled part related to the five months of partial payment will be settled between January and April 2021 and remedying any breach

of contract. As of the end of September, NEPCO has honoured its payment obligations according to these agreements.

- As for conventional developers, a similar commercial arrangement is close to being agreed whereby full settlement will take place in 2021; however, the shortfall is expected to be settled over a longer period than for renewable energy IPPs.

5. FINANCIAL / ECONOMIC ANALYSIS

5.1 FINANCIAL PROJECTIONS

[REDACTED]

5.2 SENSITIVITY ANALYSIS

[REDACTED]

5.3 PROJECTED PROFITABILITY FOR THE BANK

[REDACTED]

6. OTHER KEY CONSIDERATIONS

6.1 ENVIRONMENT

Categorised B (2019 ESP) and Low/Medium E&S Risk. The provision of short-term working capital to NEPCO, an existing client of the Bank, is not associated with any new environmental or social risks or impacts. Due diligence for this transaction has comprised a phone interview with the Company, review of their COVID-19 emergency preparedness and response plan and a review of the Company's progress with implementation of the previously-agreed environmental and social action plan (ESAP) under existing exposure.

A thorough ESDD was undertaken in 2018 by external consultants and included a corporate audit and a specific assessment of the E&S risks associated with the substations and associated facilities. The ESDD demonstrated an overall alignment of NEPCO's management systems with international standards demonstrated by Quality, Environmental, and Occupational Health and Safety Management Systems certified to ISO 9001, 14001, and 18001. The ESAP agreed with the Borrower includes a number of actions related to enhancing the EHSS management systems and procedures; the acquisition of all environmental and construction-related permits; development of contractor management framework; implementation of the stakeholder engagement plan, etc. As the E&S resources and organisational capacity of NEPCO are limited and not able to bring its operations to the standards required, a Technical Cooperation (TC) assignment has been sought for both capacity building and implementation support of the ESAP. This TC assignment is still in the procurement phase. The Company has provided COVID-19 information and training for its employees and its contractors and where possible staff are working from home. NEPCO has no plans to introduce temporary or permanent redundancies. The Company has adequately communicated with their workers the measures put in place to protect them from contracting COVID-19. NEPCO is in the process of developing specific workplace risk assessment and measures to continue to ensure their workers' health and safety when lockdown restrictions are lifted in June as per the national guidelines.

This solidarity loan does not require additional monitoring or reporting. EBRD will continue to monitor NEPCO's environmental and social performance via reporting for the previous transaction.

6.2 INTEGRITY

In conjunction with OCCO, updated internal integrity due diligence was undertaken on NEPCO, its senior management and other relevant parties; as well as the financial institutions holding the overdraft facilities to be refinanced under this project. The [REDACTED] project does not pose an unacceptable reputational risk to the Bank. [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 PROCUREMENT

VISP is designed to help clients continue to provide essential pubic infrastructure services, strengthen resilience and protect reforms. The use of proceeds for the proposed Loan will be to replace short term financing taken by NEPCO during the peak of the COVID-19 crisis to allow for payments due to renewable energy producers. The proceeds of the Loan cannot be used for capital expenditure, payments to thermal power producers, fuel payments, or any unapproved expenditure. On the basis that the PP&R was specially designed to cover the procurement of capital expenditures it is proposed that the Bank's Procurement Policies and Rules not be applicable. It is noted that the Bank's funds will not support Capex, which will be covenanted in the Loan Agreement.

The TCs envisaged under the Project will be procured by the Bank or the Company in line with the Banks PPRs.

ANNEXES TO OPERATION REPORT

ANNEX 1	EBRD COVID-19 Solidarity Package - Vital Infrastructure Support Programme
ANNEX 2	Key assumptions used in the Base Case
ANNEX 3	Inclusion Package
ANNEX 4	NEPCO Reform Progress
ANNEX 5	Financial Information
ANNEX 6	Market Overview
ANNEX 7	EBRD’s Power Sector Exposure in Jordan
ANNEX 8	Overview of NEPCO’s functions
ANNEX 9	Map of Donor Activities

ANNEX 1: EBRD COVID-19 Solidarity Package - Vital Infrastructure Support Programme

The Board approved on 23 April 2020 the EBRD COVID-19 Solidarity Package, which includes in its section 3.5 the Vital Infrastructure Support (VISP). The Project falls under section 2 of the VISP related to "Stabilisation facilities for key infrastructure providers".

Section 2 of the VISP is pasted below, and the specifics of the Project have been added where relevant.

"**Stabilisation facilities for key infrastructure providers**

Criteria	Project's description
These would be direct loans to providers and enablers of key infrastructure services, whether state agencies providing/financing vital infrastructure/local authorities providing municipal services, SOEs, municipalities/municipally owned entities or private providers, and whether under sovereign structures or not.	NEPCO is an SOE providing a key infrastructure service, being the grid operator and owning the vast majority of generating assets in Jordan.
The use of proceeds would be to provide emergency liquidity – on both a short term and, where required for affordability reasons, longer term basis - to compensate for temporary revenue losses due to COVID-19 related issues (whether government action, consumer constraints or temporary reduction in demand), with the ultimate aim of protecting the delivery of vital services and infrastructure in the economy.	The proceeds will be used to provide emergency liquidity to compensate for revenue losses due to COVID-19 related issues (partial/non-payment from its consumers, load reduction due to suspension of all major economic activities). It will specifically be used to replace short term financing with a long term affordable loan therefore taking out some pressure incurred by NEPCO because of the crisis Following the difficult financial situation they faced due to the energy crisis of 2011-15, NEPCO was on track towards recovery through a set of measures designed to reduce operating costs, gradually reach a cost reflective tariff, optimize liabilities, and manage working capital. However, the outbreak of the COVID-19 pandemic is putting a halt to NEPCO's recovery path and delaying the achievement of major milestones, such as a tariff structure revision, and cost reductions. **The liquidity pressure NEPCO faced during the pandemic control phase (March through May 2020) was due to the inability of distribution companies to bill and collect revenues from end-users**. Although the aforementioned has had dire effects on NEPCO and the sector, the effects remain temporary and the sector is expected to recalibrate in the next few months. Once cash flows are restored from the distribution companies, which together comprise 95% of NEPCO's revenues, the liquidity situation would be restored. The seven-year tenor is based on the cash flow and tariff analysis described in *Annex 2*.

Where extended on the sovereign or sovereign guaranteed basis the standard sovereign pricing and the EBRD standard term and conditions will apply.	The loan will be extended on a sovereign guaranteed basis and the standard sovereign pricing will apply.
Counterparts would be existing clients or otherwise large and sophisticated enough to become clients of EBRD and comply with the Bank's requirements and standards.	NEPCO is an existing client of the Bank (OpID 50034).

Use of proceeds would be emergency liquidity, but the condition for support, in order to substantiate the transition rationale, would need to be:

Rationale	Borrower's situation
Revenues are curtailed because of the COVID-19 crisis demonstrated through suitable evidence of track record prior to the COVID-19 crisis	Since the onset of the global spread of COVID-19 virus and the subsequent lockdown measures implemented by the Jordanian government, bill collection and settlement (i.e. revenue collection) greatly deteriorated due to (i) lack of manpower on ground to execute manual bill collection in light of the movement restrictions, and (ii) payment vacation orders issued by the government for affected individuals and sectors. [REDACTED]**.**
In the absence of the Bank's intervention, there would be a significant risk of collapse in service provision (e.g. the utility would risk financial instability that may undermine its ability to continue to provide vital services to people and businesses, pay its suppliers or employees or continue essential operations and maintenance (O&M) or capital expenditure);	Due to the working capital pressures posed by the COVID-19 crisis, NEPCO (i) deferred some of the electricity payments due to thermal and renewable energy IPPs (around 25%), and (ii) deferred other payments. Although the peak of the crisis has now passed NEPCO continues to face some cash flow pressures that they are aiming to fill by borrowing from local and international financial institutions. NEPCO is also committed to restore the balance in the sector. NEPCO already agreed on an acceptable way forward with the RE producers and is now close to finalising an agreement with the conventional IPPs as well.
High level reassurance that responses to address the COVID-19 crisis will be implemented while minimizing potential distortion to the market.	NEPCO's commitment to reinstate payment discipline to the sector has been confirmed and will be documented. Furthermore, the loan will only be signed after the Bank is comfortable that NEPCO has reached a settlement agreement with the RE and conventional IPPs.

ANNEX 2: Key assumptions used in the Base Case

[REDACTED]

ANNEX 3: Inclusion Package

Addressing challenges related to the regulatory framework on skills assessment in the sector

At policy level, the Project will support NEPCO to engage with EMRC, the Ministry of Energy and Mineral Resources (MEMR) and the Ministry of Labour (MoL) on the introduction of a new regulatory framework for the certification of electrical technicians and specialists. As the number of licenses to operate renewable energy systems increases and new companies enter the market, there is a need for a mechanism to qualify technicians - across all levels of voltage, including 1 kV and above - and, ultimately, ensure the safety of the systems and its workers.

The existing mechanism is called “authorization” and works on a voluntary basis through company-specific processes. NEPCO enforces this “authorization” as its technicians, specialists and engineers must have been working on the grids for a number of years to qualify, receive written recommendation by their supervisor, undergo a training at their Electrical Training Centre (ETC) focused on safety standards and pass a test in front of NEPCO’s “authorization committee”. NEPCO’s ETC, with the help of Al Hussein Technical University (HTU), will upgrade its training programme in line with international best practice and expand it across the whole sector to train and, upon successful completion, certify electrical technicians and specialists.

The ETC is well placed to expand such a programme across the sector as it is an established institution. It offers work-based learning opportunities to prepare NEPCO’s specialists in designing, installing, operating, checking and maintaining electrical systems. The focus is on technical skills, including all the necessary practical and theoretical technical information related to power transmission and distribution lines and their transfer stations, mechanical maintenance of electrical generation stations, welding, wiring and various control functions.

Improving youth access to skills and employment and equal opportunities

The Project will also help address the country’s key transition challenge of youth unemployment. The youth unemployment rate in Jordan reached 37.2%, in 2018 and remained at 36.7% in 2019, which is among the highest rates globally (the World Bank, 2019). This is due to many reasons, including a significant skills mismatch between the supply of the higher education and TVET systems and the skills demand in the market. To date, youth trainings by the Vocational Training Corporation (the biggest training provider in the country) have not been effective in tackling the problem, while needed public-private partnerships and private sector interventions are limited (European Training Foundation, 2014).

To address this challenge, it is vital to improve the transition from school to work, where the issue is not just with school leavers but also with college and university graduates. According to the national Department of Statistics (DoS), approximately 54.7% of the unemployed hold a secondary education certificate or a higher qualification and unemployment rates are highest among those who have attained tertiary education in comparison to other educational levels (DoS, 2019). This indicates a great loss in the return on investment in education. In particular, women, in spite of having a slightly higher ratio of educated females to males, experience a labour force participation rate of only 14%, compared to a rate of 64% for men (ILO modelled estimates, 2019), suggesting that they face more obstacles when attempting to enter the workforce than their male counterparts. Low wages, lack of flexible work arrangements, along with other constraints can discourage or stop young women from achieving their economic potential and contributing to the economy.

Hence, this Project will help NEPCO to strengthen its role in improving the school-to-work transition of young graduates and support its youth career development function through the formalisation of an apprenticeship arrangement with the Al Hussein Technical University of the Crown Prince Foundation (HTU) and its Bachelor programme in Energy Engineering. NEPCO will offer the possibility of spending eight months at its sites to gain market-relevant skills, as well as cover the salary of the selected apprentices. The target for the share of female students to take part in the apprenticeship programme is 25% -in line with the percentage of women among electric engineering graduates (Jordan Engineers Association, 2017). This represents a substantial improvement in comparison to the short (eight-week) dual education programme previously offered by NEPCO and is an example of best practice in the context of Jordan, where the regulatory framework for institutionalising apprenticeship arrangements is still a work in progress.

Improving equal opportunities in employment

The Project will promote the development of specific actions targeting NEPCO's Human Resources (HR) policies and practices to ensure the company is equipped to provide its female and male employees and younger market entrants with improved working environment arrangements, adequate training and other support activities for their career development. This will include the development of an Equal Opportunity Action Plan to support the role of women in the company and to accommodate the needs of women employees who face additional gender specific challenges during the COVID-19 crisis, such as increases in caring responsibilities. Specifically, as the crisis helped demonstrate the viability of working from home, the Project will contribute to overcome key barriers for female labour force participation by introducing working-from-home and flexi-work arrangements and by extending paternity and maternity leaves (against certain criteria to be defined in the HR policies and procedures). The Project will also focus on managerial capacity building, in particular to help career progression, by supporting NEPCO to identify staff with strong leadership qualities and planning capabilities, and to develop detailed recommendations of measures to tackle identified deficiencies and create personalised programs for effective leadership development. Special attention will be given to women employed by NEPCO to ensure gender equality and women progression into the company.

ANNEX 4: NEPCO Reform Progress

A. Background

In December 2018, the Bank signed an 18-year USD 265 million sovereign loan to the National Electric Power Company (**NEPCO**), the central player in the Jordanian electricity sector, acting as transmission system operator, single buyer of power, wholesaler of fuel and active in generation. The Project combined two interlinked goals: helping Jordan move to widespread penetration of RE and reforming NEPCO to become a modern, efficient and sustainable company.

The Project entailed a policy dialogue initiative to support the implementation of a comprehensive corporate reform roadmap (the **Roadmap**), including an agreed Corporate Governance Action Plan (**CGAP**), focusing on four areas: corporate governance and compliance, financial forecasting and risk management, e-procurement and RE integration. The implementation of the Roadmap is supported by technical cooperation assignments (TCs) [REDACTED] financed by the EBRD Shareholder Special Fund (SSF). Additional funding is provided by the Korean Knowledge Sharing Programme for the e-procurement TC.

B. Creating a Showcase

After signing, the Roadmap was recognised as a key contributor to Jordan's reform agenda in the energy sector and a replicable structure for future EBRD projects. After signing of the loan agreement in 2018, key Roadmap milestones were (i) included in Jordan's *5-year Matrix for Growth* developed by the authorities in coordination with the World Bank; e.g. NEPCO's functional and accounting separation by business lines; and incorporated in Jordan's *Energy Sector Financial Sustainability Action Plan*, which is prepared by the Ministry of Energy in coordination with the World Bank and defines the actions for the energy sector to achieve financial sustainability. Both documents were endorsed by the Jordanian Government and are annexed to the country's Energy Strategy for 2020-2030.

The Jordanian authorities have indicated their willingness to replicate NEPCO corporate reforms' to other SoEs, namely in relation to the Board Nomination Policy and e-Procurement.

C. Progress

The implementation of the Roadmap is underway with strong ownership from NEPCO. There is progress in all areas of intervention with particular results in corporate governance and e-procurement.

(1) Achievements to date

NEPCO with the support of EBRD and external consultants successfully completed the set of conditions precedent for the second disbursement for refinancing within seven months from signing (July 2019). These include:

a. Financial forecasting and risk management:

- Deliver an in-house financial model by business area;
- Appointment of the external financial consultant.

b. Corporate governance and compliance:

- Conclude study on skills required on the Board and define Board profiles;

- Define role and responsibilities of the corporate secretary;
- Report from a consultant on the strategy of the company, indicating strengths and areas for improvement;
- Approval of the compliance function and the recruitment of a compliance officer (although there are challenges in recruiting a suitable individual, see below)

c. **E-Procurement:**

- Complete the diagnostic of the procurement processes;
- Approve the pilot method for e-procurement.

d. **Renewable energy integration:**

- Provide a preliminary report on renewable energy integration by an external consultant.

(2) Ongoing implementation

a. Financial forecasting and risk management – This area of focus is fully aligned with the authorities' objectives for the power sector. The consultants will support NEPCO with the accounting separation of business lines and a gap analysis in respect of the legal separation and do also a study on the legacy debt. Although the consultant was selected by the end of June 2019 (as planned) the assignment only started in the beginning of 2020 due to delays in the EBRD contracting process. The consultant is committed to expedite their work to recover part of the delay. The Consultant has mobilized the local team to start reviewing documents, and conducting interviews with the relevant teams at NEPCO.

b. Corporate Governance and compliance – The Board evaluation exercise has been completed, which has served to develop a Board profile for NEPCO, with indication of the skill-mix that the Board should possess. Based on this exercise, **a new nomination policy is being finalised with NEPCO's board of directors to finalise the necessary approvals and escalate to the shareholders (i.e. the government).** It includes recommendation for increased RE expertise and larger female participation at the Board. The new policy will be submitted to NEPCO's Board and to the Cabinet for approval and the authorities expressed the intention to make it an example for other SoEs. **In parallel, the implementation of the CGAP is being done on time and with results above the expectations for corporate governance.**

Of note is the successful Strategy Workshop delivered by the consultants for NEPCO's leadership team at the beginning of February. It was the first time that NEPCO's team followed a logic process to think about its strategy and produced a list of nine strategic initiatives that sets NEPCO's direction for the next three years. The results of the workshop will be incorporated in NEPCO's strategy and aligned to the budget exercise for the next years. NEPCO will input the strategic initiatives into the budget horizon for next year, and as projections for the subsequent two years of the strategic plan. It is foreseen that this exercise should serve to align the budget and strategy development processes, which are currently undertaken separately, causing mismatches between the company's strategic direction and available budget.

Compliance – This is an area where the budget constraints of NEPCO have negatively affected the pace of the reforms. NEPCO has approved the creation of the Compliance Department [REDACTED].

E-Procurement – The work of Bank in the area of e-procurement in Jordan (NEPCO and other entities) is having strong results. An e-procurement pilot under the Roadmap prepared NEPCO for anticipated shift in policy. In November 2019 the Jordanian government passed a new procurement regulation making it mandatory for SoEs and government agencies to start implementing electronic procurement. This in turn served to support the Bank's project and the client's engagement. NEPCO commitment has been further strengthened by interest in the pilot from other SOEs in the sector; thus NEPCO e-procurement pilot created a showcase for SOEs in Jordan. As a consequence of the amendments to Jordan's Public Procurement Law introduced in 2019, NEPCO is currently undertaking internal discussions and liaising with authorities the need to obtain a special approval from the government allowing NEPCO to be the implementation agency instead of the Jordan governmental institution as required by the new law. Furthermore and in light of the current COVID-19 circumstance, the Bank agreed to provide an extension on the appointment of the PIU consultant, now expected in the coming few weeks, NEPCO had already initiated the discussion with the preferred bidder (WSP) to take on this assignment. The appointment of the PIU Consultant is now imminent pending clarifications regarding the withholding tax treatment.

c. **Renewable Energy Integration** – In 2019 NEPCO worked extensively on the preparation of its Master Plan for 2020-2030 and the figures have now been reviewed by an independent technical advisor as part of a TC organised by EBRD. The outcome of this TC it feeds into Jordan's Energy Strategy demonstrating the fit of the Project with the country strategy. The assignment was concluded end of July 2020.

The financial consultant will assist NEPCO to make improvements in financial disclosure, including to disclose information on the financial flows towards renewables in line with the guidelines of the Task force on Climate related Financial Disclosure (TCFD). [REDACTED]

Lessons Learned/ Challenges

A number of factors combined ensure that the Bank's intervention yields the desired outcomes, namely: careful design of the implementation plan (including the phasing and complementarity of the various TCs), strong engagement with NEPCO, experience of the Bank, ability to adapt the intervention to NEPCO's immediate needs and the quality of consultants (who were carefully selected by the Bank). Thus far, the consultants have been working with their NEPCO's counterparts without overloading the client or losing momentum.

Some challenges emerged due to NEPCO's budget constraints, for example: the appointment of the Compliance Officer has not progressed yet and the strengthening of the internal audit function will have to be redesigned and new donor funds sourced because NEPCO has asked for further on-site support beyond the scope of the agreed TC. The Bank is already working together to find a solution for such type of challenges.

The financing of the capex for RE integration is delayed and it is in tender preparation / pre-tendering stage for the capex components. The delay in the capex implementation is mainly caused by NEPCO's inefficiencies and lack of institutional capacity to follow the EBRD's procurement process. The Roadmap under implementation is expected to address some of these inefficiencies.

D. Additions proposed by the Project

The Banking team alongside the Gender and Economic Inclusion team at the Bank identified and designed the Bank's next intervention under the proposed project. Over and above the comprehensive Corporate Reform Roadmap agreed with the client in December 2018, the Bank will aim to introduce additional measures targeting the following:

1. advancing the Bank's policy dialogue initiative by conditioning the disbursement under this facility to the completion of the following actions under the existing Roadmap:
    i. NEPCO has presented to its Board of Directors the draft of a new Nomination Policy as a first step to allow for NEPCO's shareholders to approve such Nomination Policy;
    ii. NEPCO's management has prepared, and the Board of Directors have approved, a comprehensive and well-defined, standard induction pack and consultation process in line with best practices;
    iii. NEPCO's Board of Directors has approved the description of the role and responsibilities of the Risk and Audit Committee of the Board of Directors in accordance with CGAP;
    iv. NEPCO's Board of Directors has reviewed the reporting line of the Corporate Secretary within the Borrower's organization chart in accordance with CGAP;
    v. NEPCO's Planning Committee has been restructured to update the roles and responsibilities of its members, as per the consultants' advice and the terms of reference approved in accordance with CGAP; and
    vi. NEPCO's CEO has approved the ToRs for the Compliance Officer, Risk Coordinator, Regulatory Affairs and Strategy & Business Planning Function.
2. defining a new scope of work related to HR policy within NEPCO, to ensure that NEPCO is equipped to deal with shocks such as the one currently experienced, while providing its staff adequate tools, training and protection;
3. improving NEPCO's training programme with the aim to strengthen its role in improving the school transition of graduates and support its youth career development function and support the role of women in technical positions;
4. supporting NEPCO's staff in their managerial capacity building to help effective career progression and reinforce NEPCO's skills.

ANNEX 5: Financial information

7.1: Financial statements 2015 - 2028
[REDACTED]

ANNEX 6: Market Overview

1. Background

The basic parameters of the Jordanian energy sector are:

General	
Population (2018)	9,956,011
GDP per capita (2018 USD at PPP)	9,348
Total primary energy supply (2018 kToe)	9,712
Per capita primary energy consumption (2018 kgoe)	942
Imports as % of primary energy consumption (2018 %)	88
Electricity	
Electricity generation (2018 GWh)	19,755
Electricity consumption (2018 GWh)	17,532
Electricity consumption per capita (2018 kWh)	1,701
Peak demand sent-out (2018 MW)	3,205
Available capacity sent-out (2018 MW)	5,236
Electrification rate (2018 %)	99

Note that the 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. A distinguishing feature of the Jordanian power sector is the sustained growth in recent years of both aggregate and peak demand, as set out below. NEPCO forecast that total generation and peak demand will continue to grow at similar rates until 2025, reaching 24,250 GWh and 3,645 MW respectively.

Demand	**Units**	**2014**	**2015**	**2016**	**2017**	**2018**	**5yr historic CAGR**
Peak demand	MW	2,930	3,330	3,250	3,320	3,205	1.1%
Electrical Consumption	GWh	15,419	16,178	16,843	17,504	17,532	2.6%

2. Transmission

NEPCO owns and operates the Jordanian transmission network which comprised 1,164 km of 400 kV transmission lines, 3,636 km of 132kV lines and 13,991 MVA of substation capacity at the end of 2018. The system is interconnected with Egypt *via* a 400 kV single circuit submarine cable at Aqaba and a 400 kV single circuit OHL from Amman North substation to Syria. The country signed an MoU with Saudi Arabia and Iraq for the establishment of an interconnection between the countries.

Both imports and exports are relatively small and the resulting position is that Jordan is a relatively small net importer. While there is no expectation of the availability of significant import volumes in the near future, although Egypt plays an important role in providing frequency response services to Jordan, there are hopes for exportation in the medium term.

NEPCO is 100% state owned and is responsible for purchasing all grid-connected power and supplying it to 12 high voltage industrial consumers and the three distribution companies. NEPCO is also the counterparty under the long-term power purchase agreements signed with Jordan's five thermal IPPs, Round 1 Solar IPPs, Round 1 Wind IPPs, and Round 2 Solar IPPs to date. In this capacity it is also responsible for purchasing and supplying the fuel required for the five thermal IPP plants. Fuel purchases by CEGCO and Samra (see below) are also passed through to NEPCO.

3. Generation

Jordan's electricity generating capacity is overwhelmingly fossil-fuelled, with c. 994 MW of renewable capacity as of 2018, principally two small hydropower plants, two large wind farms, and several utility scale PV power plants. As of the end of 2018, Jordan's 4,242 MW of nominal installed capacity is mainly operated by five entities:

- Central Electricity Generating Company (**CEGCO**), which owns and operates 1,074 MW of capacity, principally the Aqaba (656 MW steam turbines), Rehab (357 MW combined and simple cycle gas turbines) and Risha (60 MW combined cycle gas turbine) thermal plants. CEGCO was privatised in 2007 and is now owned 51% by ENARA, a Saudi/ Greek consortium, 40% by the Jordanian government and 9% by the Jordanian Social Security Corporation.
- Samra Electric Power Generating Company (**SEPCO**), which owns and operates the 1,175 MW gas-fired Samra power plant. SEPCO is 100% owned by the Jordanian government.
- AES Jordan PSC (**AES Jordan**) which owns and operates the 380 MW combined cycle gas-fired Amman East power plant, which was constructed under a BOO arrangement secured with a long-term PPA signed with NEPCO in 2007 and the IPP4 Al Manakher 240 MW reciprocating engine plant which was funded by EBRD and OPIC and began operations in July 2014 (OpID 44284). AES Jordan is owned 40% by Mitsui & Co, 37% by AES Corporation and 23% by Qatar Electricity and Water Co.
- Qatraneh Generating Company (**Qatraneh**), which owns and operates both IPP2 – the 373 MW combined-cycle gas-fired Al Qatraneh plant which became operational in 2011, and IPP3 – the 573 MW reciprocating engine plant which uses the same Wartsila technology as IPP4 and which became operational in 4Q 2014. This plant was constructed pursuant to a PPA signed with NEPCO in 2009 and became operational in 2011. Qatraneh is owned by Korea Electric Power Corporation (**KEPCO**) and Xenel Industries Ltd of Saudi Arabia.
- Hussein Thermal Power Station owned by ACWA Power is a 485 MW CCGT power plant in Zarqa, Jordan and reached full commercial operations in October 2018. The project replace HFO-fired, conventional thermal steam plant which was taken out of operation in December 2015. This plant benefits from a PPA signed with NEPCO for 25 years. The project's Phase I COD was reached in July 2018, and Phase II COD in

October 2018. Financing was signed in December 2016 and is provided by a lender consortium led by EBRD and IFC (OpID 47412). ACWA Power is also developing a 50MW solar PV project that was also financed by EBRD (OpID 49025) and is currently in pre-construction phase.

MEMR and NEPCO have been pursuing options to diversify both Jordan's sources of gas and its fuel options more generally. In relation to the latter, the first priority is the development of Jordan's excellent renewable resources but the authorities are also committed to exploiting Jordan's oil shale deposits for thermal generation.

Oil shale

In October 2014, NEPCO signed a 30-year power purchase agreement with a consortium led by Eesti Energia (Enefit - the Estonian utility that operates most of the world's installed oil shale generation capacity) to build a 470 MW, USD 2.1 billion oil shale-fired power plant and have it operational in 2H 2020. The plant will utilize Jordan's vast reserves of oil shale and help reduce the Kingdom's imports of oil products for power generation. The plant is expected to consume around 10 million tons of oil shale per year.

The consortium that owns the project is YTL Power International Bhd of Malaysia and Yudean Group of China, which each hold a stake of 45 percent, with 10 percent owned by Enefit. The EPC agreement (with China's Guangdong Power Engineering Corporation) was signed in October 2014, whereas the initial financing agreements were signed with Chinese banks in September 2015. In March 2017, Attarat Power Company, the project's SPV, announced that it had secured financing from a consortium of Chinese banks for the oil-shale project, and the project is expected to deliver capacity in two phases, 235 MW in 2H 2020 and 235 MW in 1H 2021.

Nuclear

Following years of consultation and development, the country recently scrapped plans to construct a 2,000 MW nuclear power plant with a total cost of USD 10 billion. The original project was in accordance with an intergovernmental agreement with Russia with Rosatom as developer and shareholder alongside the Government of Jordan. Instead, the country signed MoUs in December 2017 with American and Russian counterparts to examine the possibility of using Small Modular Reactors for electricity generation among other applications.

4. Distribution and supply

Jordan has three distribution companies serving 2.2 million consumers. Residential customers account for approximately 46% of consumption by volume, industrial 22%, commercial 14%, water pumping 15% and street lighting 2%. Losses in the distribution network are at reasonably low levels of c.12%. The three distribution companies are:

- 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.

5. Regulation

The Jordanian power sector is governed by the 2002 General Electricity Law (the **Electricity Law**). The Electricity Law allocated policy responsibility and general oversight of the sector to MEMR and established the EMRC as the sector regulator. The EMRC is managed by a council of five commissioners, appointed by the government on a recommendation of the Prime Minister. Each commissioner serves for a four-year term renewable once. The EMRC's mandate includes ensuring:

- the provision of safe, secure, reliable and high quality electricity services (generation, transmission, system operation, distribution and supply);
- that electricity sector actors charge prices that are sufficient to finance their activities and to earn a reasonable return on their investments; and
- that sector actors comply with national environmental and public safety laws.

To this end, the EMRC has the power to grant a licence to any person engaged in an electricity sector activity, to regulate such persons and to determine the prices charged by them, other than generation. No person may perform an electricity sector activity without a licence from the EMRC.

Both EMRC and the Jordanian government recognise the importance of promoting demand side management and energy efficiency in addressing the power capacity and fuel crises. The EMRC has accordingly developed rules providing for net metering in order to facilitate self-generation and implemented changes to the distribution tariff methodology to include incentives on the distribution companies to promote energy efficiency.

6. Tariffs

Generation prices are not explicitly regulated under the Electricity Law. However since end-user tariffs and network charges are all regulated, they are implicitly restricted. Jordan was one of the most successful countries in the region in reducing energy subsidies. In the power sector, this effort was largely complete by 2010, by which time average tariffs had been increased to, or close to, cost recovery level at USD 0.09 per kWh. However the dramatic rise in fuel costs caused by interruptions to the Egyptian gas supply (see below) caused the government to restrict power price increases to affordable levels.

Under the terms of the USD 2 billion Stand-By Agreement with the IMF in 2012, the government committed to increasing energy tariffs and to returning NEPCO to solvency by 2017/2018. Improvements have been made, but as of end of 2015 NEPCO was still loss making. Electricity tariffs were increased in December 2012 to an average of USD 0.12/kWh but this was substantially below the 2012 cost recovery level of c. USD 0.26/kWh. The government approved a five-year program of tariff increases on 15 August 2013 in agreement with the IMF. Annual tariff increases of up to 15% per year, depending on customer sector and level of consumption, were implemented, although in 2015 the government intervened and reduced the increase in that year by half to 7.5%. Similarly, and following the decline in oil and LNG prices worldwide, tariff increases were frozen for 2016.

In 2016, EMRC adopted an important tariff reform: introducing the new "fuel surcharge", which took effect from 1 January 2017. The first reform adds a surcharge to the end-user tariff to compensate for any fuel costs NEPCO incurs because of a rise in hydrocarbon prices above a set level. The current level is 55 USD/bbl, which was NEPCO's break-even point. There is no discount if costs fall below that level until NEPCO's historic deficit has been recovered. The intention is to avoid the need to subsidise NEPCO in the future.

EMRC has also been changing tariff levels for different consumers to reduce the financial burden on some sectors, and reduce the distortion inherent in the cross-subsidy structure. Such changes took effect in tariff periods starting May 2015, November 2016, and July 2018. EMRC also passed another batch of tariff reductions for productive sectors which took effect in 2019, and more recently in January 2020. The main impacted sectors are hotels, telecoms, and hospitals. The private hospitals sector, which was previously part of the Standard tariff with different tariff segments depending on consumption, saw the grouping of all tariff segments into one single tariff. Water pumping tariff saw a 22% increase in July 2018.

In June 2016 the government reached agreement with the IMF regarding a follow-on Extended Financing Facility which contains new conditions relating to cost-reflective energy tariffs and the implementation of Jordan's RE strategy, as well as other medium term plans for oil shale, nuclear, and natural gas alternative sources which are expected to push costs further down. Main end-user tariffs are set out in the following table.

In 2019, the government has worked on the new energy strategy 2020-2030 with a vision to 2050. During this time they put halt on new approvals for plants with a capacity above 1 MW. One of the executive action plans developed to support the strategy is the Energy Sector Financial Sustainability action plan, which was developed in coordination with the World Bank. The main components of the action plan are:

1. **NEPCO earnings** – this will be done through (i) bulk supply tariff and end-user tariff optimization, (ii) cost saving, (iii) conventional PPA renegotiation, (iv) cross-subsidy reduction;
2. **Demand/Supply management** – main actions include (i) reduce grid bleeding (i.e. revise wheeling charges), and (ii) explore export options;
3. **Working capital** – enact a (i) one-time-settlement (OTS) of public sector receivables to DISCOs against MoF-NEPCO loan, (ii) convert remaining NEPCO MoF advance into a term liability, (iii) introduce an Electricity Bill Recovery Bill for all public agencies;
4. **Debt** – (i) one-time-settlement (OTS) of public sector receivables to DISCOs against MoF-NEPCO loan, (ii) seek support from donors, (iii) adopt a debt optimization plan;
5. **Governance** – (i) EMRC to prepare multi-year tariff reform strategy, (ii) EMRC to adopt best practices, (iii) unbundling NEPCO to Separate Business Units (SBU).

The action plan was approved by the Cabinet in mid-2019.

In July 2020, the Minister of Energy and Mineral Resources announced the new Energy Strategy 2020-2030, which is build energy independence and exploiting local energy sources. The strategy proposes the introduction of an additional 800 MW of renewable energy by 2030 to increase the share of renewable energy from generation to around 30%, complemented by an additional 15% from Oil Shale, which together will increase generation from local resources to around 45% of generated capacity.

Tariff (USD cents per kWh)	Jun-12	Dec-12	Aug-13	2014	Jan-Feb 15	Feb-15	May-15	Nov-16	July 18	Jan-20
Residential tariff										
from 1 to 160 kWh/month	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
From 161 to 300 kWh/month	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
from 301 to 500 kWh/month	12.1	12.1	12.2	12.2	12.1	12.1	12.1	12.1	12.1	12.1
from 501 to 600kWh/month	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1
from 601 to 750 kWh/month	16.1	19.9	19.9	21.5	23.0	22.3	22.3	22.3	22.3	22.3
from 751 to 1,000 kWh/month	19.1	23.7	23.8	25.6	27.4	26.5	26.5	26.5	26.5	26.5
more than 1,000 kWh/month	24.6	33.2	33.2	36.6	38.2	37.4	37.4	37.4	37.4	37.4
Standard tariff*										
from 1 to 160 kWh/month	N/A	N/A	5.1	5.7	6.2	5.9	5.9	5.9	5.9	5.9
From 161 to 300 kWh/month	N/A	N/A	11.2	12.3	13.5	13.0	13.0	13	13	13.1
from 301 to 500 kWh/month	N/A	N/A	13.4	14.7	2.0	15.4	15.4	15.4	15.4	15.4
from 501 to 600 kWh/month	N/A	N/A	17.7	19.5	21.4	20.5	20.5	20.5	20.5	20.5
from 601 to 750 kWh/month	N/A	N/A	21.5	23.1	24.7	23.8	23.8	23.8	23.8	23.8
from 751 to 1,000 kWh/month	N/A	N/A	24.9	26.2	27.4	26.8	26.8	26.8	26.8	26.8
more than 1,000 kWh/month	N/A	N/A	34.9	36.6	38.4	37.5	37.5	37.5	37.5	36.1
Commercial										
from 1 to 2000 kWh/month	12.9	12.9	14.8	17.0	19.6	18.2	18.2	16.9	16.9	16.9
more than 2000 kWh/month	15.0	17.9	20.6	23.8	27.2	25.5	25.5	24.7	24.7	24.7
Banking*	N/A	N/A	37.5	39.3	41.2	40.2	40.2	40.2	40.2	40.2
Telecoms tariff										
from 1 to 2000 kWh/month	12.9	32.0	33.7	35.4	37.1	36.2	36.2	32.4	24.68	19.0
more than 2000 kWh/month	15.0	37.4	39.3	41.3	43.3	42.3	42.3	38. 5	30.75	25.1
Light industry										
from 1 to 10,000 kWh/month	8.1	8.1	8.1	9.3	10.6	10.0	10.0	10	10	8.6
more than 10,000 kWh/month	8.1	8.1	9.3	10.6	12.3	11.4	11.4	11.4	11.4	10.0
Medium industry										

Day time consumption	8.5	8.9	10.2	11.7	13.5	12.6	12.6	12.6	12.6	11.1
Night time consumption	7.1	7.5	8.6	9.9	11.4	10.6	10.6	10.6	10.6	9.2
Large industry										
Day time consumption	11.6	13.3	15.3	17.5	N/A	N/A	18.8	17.5	N/A	21.2
Night time consumption	9.3	10.7	12.3	14.3	N/A	N/A	15.4	15.4	N/A	15.4
Agricultural tariff*	N/A	N/A	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Water pumping tariff*	N/A	N/A	10.7	12.3	14.1	13.3	13.3	13.3	16.2	14.8
Hotels tariff (flat tariff)*	N/A	N/A	20.6	23.8	27.2	25.5	12.8	12.8	12.8	12.8
Hospital tariff (new)									28.2	22.6
Street lighting tariff*	N/A	N/A	13.0	15.0	17.2	16.1	16.1	16.1	16.1	16.1
Armed forces tariff*	N/A	N/A	16.7	19.2	22.1	20.6	20.6	20.6	20.6	20.6
Ports tariff*	N/A	N/A	18.2	20.9	24.0	22.4	20.9	19.3	19.3	22.4

Elsewhere in the energy sector, a multi-stage reform resulted in the reduction of energy subsidies from 5.8% of GDP in 2005 to 0.4% in 2010 and the introduction of a mechanism to automatically adjust fuel prices on a monthly basis to reflect international price movements. Prices for gasoline and liquefied petroleum gas (**LPG**) for industrial consumption were not subsidised. However in January 2011 the Jordanian government temporarily suspended the automatic fuel price adjustment mechanism for diesel, kerosene and LPG for residential consumption because of popular unrest at rising fuel prices, leading to an increase in fuel subsidies to 2.5% of GDP in that year. The adjustment was re-instated in late 2012, raising fuel prices by 14% to 54% for different fuel types, effectively eliminating subsidies. To mitigate social impact, targeted cash transfers were introduced for low and middle-income households (70% of population). This measure brought fuel subsidy costs down to 1.1% of GDP in 2013, yielding savings of 2.5% of GDP at prevailing market prices. Since 2014, fuel subsidies have been completely eliminated.

7. Sector organisation, strategy and renewables

The Jordanian power sector operates on a single buyer model whereby NEPCO purchases all power and sells it to high voltage consumers and the three distribution companies. The Electricity Law explicitly contemplates a transition to a bilateral contracting model and requires the EMRC to consider this option periodically, including analysing whether enough potentially competitive entities are active to avoid an abuse of market power, whether the necessary metering and information technology infrastructure is present, the financial viability of the sector, and the impact on consumers. The conditions to the introduction of competition and price liberalisation have not yet been met.

The Jordanian government's goals for the power sector are set out in its 2007 Energy Strategy. The strategy focuses on meeting the forecast significant demand growth, which was estimated at 7.4% annually between 2007 and 2020, while improving security of supply and reducing the environmental impact of the power sector. The central component of this strategy is an ambitious programme to source 10% of generation from renewable sources by 2020, which entailed the construction of at least 1,800 MW of renewable capacity. The 10% target was finally achieved ahead of time, in 2017, which led the government to increase the official target to 20% from generation by 2020.

To meet the original target the Jordanian government passed a Renewable Energy and Energy Efficiency Law in 2010 and in 2011 solicited direct proposals from private developers for RE projects over several rounds. Under this structure, bidders are awarded projects and enter into a 20-year PPA with NEPCO, backed by a sovereign guarantee. The first round was based on a feed-in tariff of USDc 16.9/kWh for solar and USDc 11.3/kWh for wind. EBRD financed four out of 12 projects, with a capacity of 60 MW out of the total 200 MW in solar. All these projects were commissioned in 2015. The Bank also financed two out of the five wind projects totalling 130 MW out of the 330 MW total capacity awarded. All Round One wind projects are currently under development/construction.

The second round of RE projects comprise a total of 200MW solar PV capacity which was equally divided and awarded to the lowest four tariff bids, which averaged USDc 6.80 /kWh. EBRD financed three of these projects. Although Ma'an enjoys the highest irradiation in the country and was primarily the location of Round One solar, grid capacity constraints on the transmission network from the south to the centre and north, where most of the load is, forced projects to be located in the north, where irradiation levels are lower but grid capacity exists. The Green Corridor project will resolve this bottleneck as it will enhance the south to north transmission grid capacity. It is currently under construction and will be ready by end of 2019.

Round Three projects were announced in late 2016 for a total capacity of 300 MW, but then reduced to 200 MW split across 150 MW of solar PV and 50 MW of wind. According to the envisaged timeline, projects will be located in the south. Bids for the wind project were received in December 2018, however after the initial evaluation the government decided to cancel the tender. Solar PV bids, however, were submitted in April 2018, evaluated, and announced in September 2018. The bids were extremely competitive marking some of the lowest worldwide, with the lowest at USDc 2.45/kWh. The winning bidders have been announced and negotiations started but the government is yet to finalise the process. The projects are expected to reach commercial operations not earlier than 2024.

Despite the rapid decline in the cost of solar power in Jordan, the government remains committed to wind power as well because of the importance of energy diversity and in particular the different diurnal and seasonal distribution of wind generation, as opposed to solar generation.

In parallel, RE projects are developed under other approaches, including direct proposals from the private sector, EPC basis by the government, and self-consumption. The Wheeling and Net Metering regulations, which allow consumers to generate electricity and offset their own consumptions, have instigated the development of RE projects, mostly by the highest paying consumers. The Bank notably financed the largest private-to-private Wheeling project in 2019 and the Project is being developed under this framework as well. It has to be noted however that it is expected to increase the capacity of RE projects connected to both the transmission and distribution networks, and will likewise reduce electricity demanded from the single buyer system. This will result in decline in NEPCO's sales, while exposing it to the challenge of balancing all such intermittent supply of power. As a result, it is likely that a limited number of projects be granted a generation license to operate under the Wheeling regulations in a near future.

ANNEX 7: EBRD's Power Sector Exposure in Jordan

EBRD has an existing exposure to the Jordanian power sector and NEPCO of c. EUR 565 million as of August 2020, of which c. EUR 496 million in disbursed operating assets. This comprises:

Op ID	OP NAME	EBRD (EUR)	Operating Assets (EUR)
44973	Ma'an Solar Power Project	17,384,146	17,384,146
44284	IPP4 Al-Manakher Power Project	45,907,119	45,907,119
48153	FRV Al Mafraq Solar PV Project	28,842,423	28,842,423
48322	ACWA Power Mafraq PV IPP	21,037,844	21,037,844
49072	Al Safawi Solar PV Project	26,293,764	25,846,860
46700	EJRE Solar Project Jordan	17,301,554	17,301,554
46701	Greenland Solar Project Jordan	8,921,268	8,921,268
48100	Al Rajef Wind Farm	54,482,382	54,482,382
47412	Hussein Thermal Power Station Repowering/Zarqa	57,857,987	57,857,987
50034	NEPCO Restructuring loan	225,579,911	170,248,989
49025	Risha Solar PV Project	18,592,552	18,592,552
46421	Oryx Solar Project Jordan	7,794,996	7,794,996
50371	SPREF: Kawar/Orange Project	12,740,441	0
49222	Shobak Wind Farm	21,764,170	21,764,170
Totals		**564,500,556**	**495,982,290**

ANNEX 8: Overview of NEPCO's functions

NEPCO's main roles in the Jordanian energy sector are:

- electricity transmission system operator;
- single buyer (off-taker) of electricity generated by state-owned and Independent Power Providers (IPPs), including utility scale renewable energy projects, and from abroad through grid ties;
- dispatcher of power from all generating units connected to national grid to the bulk-supply points of the distribution companies; and
- single importer of hydrocarbons for electricity generation.

NEPCO receives revenues from the sale of electricity to:

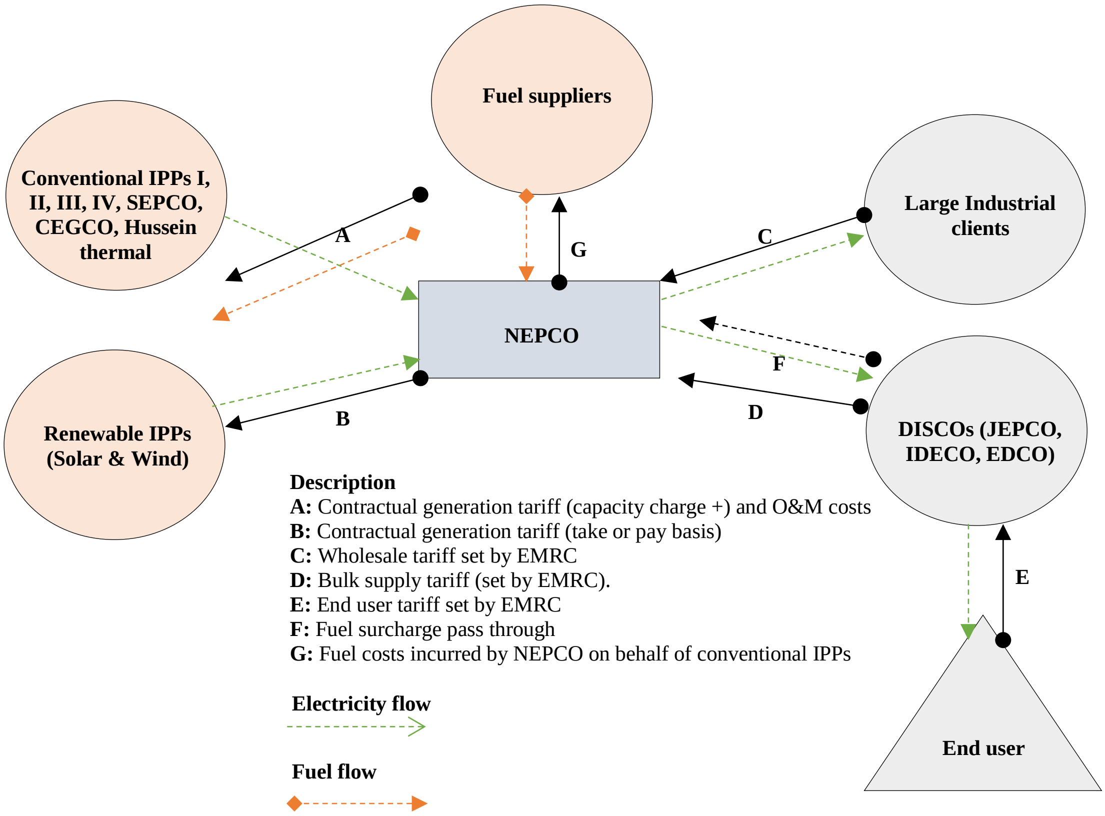
- the distribution companies - there are three distribution companies operating in Jordan, with responsibilities split geographically: Irbid District Electricity Company (IDECO) covering the Northern region, Jordan Electric Power Company (JEPCO) covering the central region, and Electricity Distribution Company (EDCO) covering the Southern and Eastern regions;
- directly to 12 large consumers, such as Jordan Phosphate Mines Company and Arab Potash Company; and
- trivial revenues from cross-border interconnections with neighbouring countries.

The distribution companies pay to NEPCO the difference between the regulated end-user tariff and the bulk supply tariff (**BST**)[5] they are entitled to receive based on a Regulatory Asset Base (**RAB**) methodology as approved by the regulator, the EMRC. The end-user tariff is also set by EMRC.

NEPCO has costs with purchase of electricity - 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; and purchase of gas for the conventional power plants.

---

5 For clarity, an alternative formulation of this phrase is: 'The distribution companies pay NEPCO the bulk supply tariff (**BST**) which is the difference between the end-user tariff they have collected and the tariff'.


Fuel suppliers
Conventional IPPs I, II, III, IV, SEPCO, CEGCO, Hussein thermal
Large Industrial clients
NEPCO
Renewable IPPs (Solar & Wind)
DISCOs (JEPCO, IDECO, EDCO)
End user
A
B
C
D
E
F
G
Description
A: Contractual generation tariff (capacity charge +) and O&M costs
B: Contractual generation tariff (take or pay basis)
C: Wholesale tariff set by EMRC
D: Bulk supply tariff (set by EMRC).
E: End user tariff set by EMRC
F: Fuel surcharge pass through
G: Fuel costs incurred by NEPCO on behalf of conventional IPPs
Electricity flow
Fuel flow

ANNEX 9: Map of donor activities

The energy sector has been a priority for the country and donor community. The sector made positive strides in recent years towards laying out the regulatory framework for private sector involvement and managed to attract regional and international players. EBRD regularly engages with donors to ensure cooperation, alignment, and no overlapping. The Project largely complements, and is in line with, the efforts and activities of other donors as per the below.

International Monetary Fund (IMF)

In March 2020, the government of Jordan and the IMF signed a four-year USD 1.3 billion Development Policy Loan (DPL) anchored by Jordan's commitments to make structural reforms designed to lower electricity costs (leveraging World Bank program described below) for businesses and create incentives for them to hire more young people. Despite the fact that the programme was initially designed before the COVID-19 outbreak, changes were made to support unbudgeted spending covering emergency outlays and medical supplies and equipment. If the impact of the outbreak is deep enough to put at risk program objectives, the program will be adapted further to the changed circumstances, upon reaching understandings with the authorities.

The signing of the agreement immediately made available about USD 139.2 million for disbursement, with the remaining amounts phased over the life of the program, subject to eight reviews

World Bank

The World Bank signed the **"First Equitable Growth and Job Creation" Development Policy** in June 2018 with a **USD 500 million concessional loan** to Jordan. The Policy includes a five-year roadmap linked to a reform matrix comprising three broad interventions; 1. Cross-cutting reform pillars; 2. Sectoral reform pillars; and 3. Governance and reform management. Within those interventions are energy specific reform and actions, being:

A. Increase Economic Competitiveness:
    1) Price signals through cost-reflective tariff to enhance financial sustainability of the electricity sector, and correction of economic distortions and better targeting of social protection benefits.
    2) Energy efficiency, energy conservation, and demand signed management aimed at reducing energy intensity of the Jordanian economy (accelerate transition to low-carbon economy).
    3) Enable competitive markets across the electricity value chain so that NEPCO, and in turn the fiscal account, is gradually relieved from its responsibility as the sole repository of sector risks and losses.
    4) Efficient planning and production of electricity.

B. Electricity Sector Contribution to Fiscal Resilience:
    1) Liquidation of legacy sector debt so that national accounts are freed from direct and contingent liability arising from legacy NEPCO debt.

C. Energy Security through Regional Integration:

   1) Diversification of improved utilisation of contracted energy (gas and electricity) supply to improve the country's economy and fiscal balance's protection against future shocks and availability of primary energy.

The World Bank has therefore included several indices within its loan which will be monitored to measure progress and realisation against predetermined targets. Such indices mainly revolve around tariff reform, to ensure social protection of vulnerable consumers on one hand, cross-subsidy across different groups are reduced on the other, and finally that tariffs are at cost-reflective levels. The World Bank will also provide technical assistance to the authorities on cross subsidies and social protection.

Moreover, the World Bank has been engaging with the authorities on a number of fronts to ease the repercussions of the COVID-19 crisis and has committed since the beginning of the crisis in March 2020 over USD 700m in budgetary assistance. Most recently in June 2020, the World Bank Group's Board of Executive Directors approved a USD 374 million project to provide cash support to 270,000 poor and vulnerable households, including those who recently lost their source of income as a result of the COVID-19 pandemic in Jordan. Direct support to NEPCO or the energy sector is not expected this year as the World Bank is currently in the implementation stage of its most recent Development Policy Financing (DPF2) approved June 2019. DPF2 aims, amongst other things, to help the government pursue its necessary macro critical reforms to lay the foundations for investment at a time of low economic growth, while supporting fiscal sustainability and containing new losses in the energy sector.

The World Bank is also actively **pursuing Concentrated Solar Power (CSP)** in Jordan. A prefeasibility study was conducted, following which the authorities have requested the World Bank's assistance with the design and preparation of an RFP for a CSP project. While this is not a commitment from the authorities to pursue the technology, it is an alternative that the authorities are willing to explore, particularly given the associated storage capabilities it offers. Finally, the World Bank is also in very early stages of **providing energy efficiency grants for buildings** in coordination with the Jordan Renewable Energy and Energy Efficiency Fund (JREEEF).

The World Bank also worked on the Energy Sector Financial Sustainability Action Plan approved by the Cabinet in 2019. Pillar 4 of the action plan outlines a debt optimization solution taking into consideration three possible scenarios. It was initially expected that the optimization plan will be implemented in 2020, and the World Bank hired Deloitte to formulate a more detailed optimization plan. This action item is also mentioned in the newly published energy strategy 2020-2030 and the five-year reform matrix.

Agence Française de Développement (AFD)

The French development agency is supporting the sector through different means, including technical assistance, financing, and investment grants.

- It has engaged consultants to conduct a wheeling tariff study to advise on the cost-reflective tariff that EMRC needs to set, as current levels are deemed too low by NEPCO and do not take into consideration costs borne by NEPCO in relation to having idle baseload generation capacity as backup. Another study being conducted by AFD-appointed consultants relates to a tariff restructuring study. Although the study has now been completed and sits with EMRC, no decision has been taken with regards to scenario selected for implementation.

- AFD is also active in the sector through **financing of the Green Corridor project** alongside EIB.
- AFD is **providing grants to JREEEF**. An energy efficiency grant that was approved back in 2008 has now been turned into a cost-sharing plan to support hotels in Petra with 3-stars and below through energy audits and energy efficiency measures whereby AFD provides 50%, matched by contribution from the hotels owners and JREEEF. In cooperation with JREEEF, AFD is also conducting a geothermal study on three sites, including drilling, feasibility of each side, and recommendations on implementation.
- AFD is preparing a new policy loan for Jordan with several indicators for the power sector. It is understood that the indicators are in line with the World Bank’s 5-year matrix.

European Union

The EU is providing a EUR 90m **grant sector support**, with the following main components:

- A EUR 45 million is provided in the form of **budgetary support** which is disbursed as per pre-agreed indicators.
- A EUR 30 million is directed to the Water Authority of Jordan (WAJ) which will be used to **construct a solar PV system to power 3 to 5 water pumping stations**. EBRD will manage the grant funds and supervise the implementation of the project.
- Another EUR 5 million is towards the **construction a waste-to-energy plant**. EBRD also partnered with EU on this front.
- Part of the EU’s efforts includes an EU **Technical study on pump storage**.
- The EU also worked with MEMR on **updating the Energy Strategy to 2030**, with a vision to 2050.

USAID

While the USAID was actively involved in the sector through its Energy Sector Capacity Building Programme, in which it provided support to JREEEF, the project came to an end in early 2018. Since then, USAID has only been supporting the gas pipeline with Noble Energy, while redefining its approach to the sector. USAID passed on the torch to Global Affaris Canada, together with JREEEF, which have appointed Cowater International on a four-year CAD 22 million project which aims to work with distribution companies on smart meters and non-core activities, capacity building in PV installation works, and finally running a twinning program between two Jordanian distribution companies – IDECO and EDCO – with Canadian utilities.

In late 2019, USAID kicked off discussion on supporting NEPCO and the government in advancing the proposed interconnection to Iraq with a total expected investment of USD 25 million. USAID expressed their readiness to extend a full grant financing to cover the due diligence and the financing of the project.

Other donors

Other donors support the sector through projects aimed at vulnerable sectors, refugees, and host communities. KfW is providing a USD 15 m grant for the construction of a 13 MW solar PV projects supplying the Zaatari camp. A similar project is currently under construction, which targets Syrian refugees and host communities in South Amman. The EUR 44 million project comprises a 40 MW solar PV project which connects to NEPCO and offsets the consumption of certain hospitals and service providers within the host communities of Syrian refugees. Additional generation, if any, will offset consumption of refugees in that area, and 50% of the savings on energy bill would go towards improving quality of service for those communities.

The organisation is also providing a EUR 45 million loan to Jordan Valley Authority to construct 30MW of solar PV capacity which is still in the feasibility study stage. It is also looking to support the authorities through a EUR 15 million support in the form of technical assistance to the Ministry of Public Works and Housing and for solar PV projects for public buildings.

GIZ is involved in policy dialogue until 2021, and supporting energy efficiency networks in the industrial sector.

While JICA previously provided technical assistance to NEPCO, it is now focussed on financing private sector projects.