

The Executive Action Plan of Jordan Energy Strategy 2020-2030

Electricity

PROGRAM 1: DIVERSIFICATION OF ELECTRIC POWER GENERATION SOURCES

1.1. USE NATURAL GAS TO GENERATE ELECTRICITY ALONGSIDE WITH RENEWABLE ENERGY PROJECTS AND OTHER COMMITTED PROJECTS IN THE KINGDOM

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Follow up the implementation of signed electric power purchase agreements with project developers	2020-2030	Ratio of availability of generation stations ----- Ratio of generating reserve at the time of loads	National Electric Power Company (NEPCO)	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC) ----- Project Developers	Commitment of the contracting parties to energy purchase agreements
Retired & expired & non-renewal contracts units	2020-2030	The number of expired & non-renewal contracts units	National Electric Power Company (NEPCO)	Electricity Generating Companies	Retired & expired & non-renewal contracts units
Sustain 10% of the generating reserve of the electrical system	2020-2030	Ratio of generating reserve	Electricity Generating Companies ----- National Electric Power Company (NEPCO)		Compliance with the adopted methodology for planning the electrical system

1.2. INCREASE THE CONTRIBUTION OF RENEWABLE ENERGY PROJECTS TO COVER THE KINGDOM'S ELECTRICITY DEMAND REQUIRED

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Allocate 200 MW to cover end users consumption from various sectors, according to the priorities of stimulating economy through clusters with 20 MW minimum built on public land during 2021-2025, according to capacity available on the network (with energy efficiency projects included implemented by the Ministry and all projects of net metering & wheeling systems with distribution companies in addition to generating electricity from waste, given the project capacity factor).	2021-2025	Number of beneficiaries ----- Ratio of renewable energy contribution to electricity generated	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC) ----- National Electric Power Company (NEPCO) ----- Electricity Distribution Companies	Private Sector	Obtain the necessary approvals ----- - Availability of the required capacity on the network ----- - Availability of the public lands ----- - Amend legislation for fair prices for the National Electric Power Company (NEPCO) & Electricity Distribution Companies

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Allocate 200 MW to cover end users consumption from various sectors, according to the priorities of stimulating economy through clusters with 50 MW minimum built on public land during 2026-2030, according to capacity available on the network (with energy efficiency projects included implemented by the Ministry and all projects of net metering & wheeling systems with distribution companies in addition to generating electricity from waste, given the project capacity factor).	2026-2030	Number of beneficiaries ----- -Ratio of renewable energy contribution to electricity generated	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC) ----- National Electric Power Company (NEPCO) ----- Consumers	Private Sector	Obtain the necessary approvals ----- Availability of the required capacity on the network ----- Availability of public lands
Allocate 200 MW for projects to cover the electrical system need according to the results of the comprehensive plan of the electric power system.	2025-2030	Ratio of renewable energy contribution to electricity generated ----- The capacity available in the power system network	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC) ----- National Electric Power Company (NEPCO) ----- Developers	Project Financiers	Fulfilling requirement within the master plan studies of the electric power system ----- Obtain the necessary approvals

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Support to small consumers and National Aid Fund beneficiaries to generate electricity using renewable energy systems	2020-2030	Number of households to benefit from the project ----- Reduce the energy bill of the target group ----- -----Reduce the losses of the National Electric Power Company (NEPCO) affecting the target group	Ministry of Energy & Mineral Resources ----- National Aid Fund ----- Energy & Minerals Regulatory Commission (EMRC)	Private Sector & Donors ----- National Energy Research Center ----- Electricity Distribution Companies	Availability of required funding
Prepare feasibility studies to generate electricity from nuclear energy	Post 2030 given the need of the electric power system	Feasibility Study	Jordan Atomic Energy Commission (JAEC) ----- National Electric Power Company (NEPCO)	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	Availability of required funding

Electricity

PROGRAM2: ENHANCE SAFETY OF THE ELECTRICITY SYSTEM AND UPSURGE SYSTEM AVAILABILITY AND RELIABILITY

2.1. MAKE NECESSARY EXPANSIONS TO THE POWER SYSTEM

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Deliver electricity to the beneficiaries inside and outside the boundaries of the existing networks according to the qualifications.	2020-2030	Number of beneficiary households	Ministry of Energy & Mineral Resources	Ministry of Social Development ----- Electricity Distribution Companies per licensed area	Apply the qualified basis of Rural Fils to the beneficiaries
Enhance transmission networks and the electric power system safety in line with the comprehensive plan of the National Electric Power Company (NEPCO).	2020-2030	Key Performance Indicators of the master plan of the National Electric Power Company (NEPCO)	National Electric Power Company (NEPCO) ----- Electricity Distribution Companies	Energy & Minerals Regulatory Commission (EMRC)	

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Enhance and support innovative projects, research and development to enhance the electrical system efficiency and efficacy.	2020-2030	Number of projects submitted ----- Number of implemented projects	Ministry of Energy & Mineral Resources	Energy & Minerals Regulatory Commission (EMRC) ----- National Electric Power Company (NEPCO) ----- Electricity Generating Companies ----- Electricity Distribution Companies	Applicability of projects submitted
Start a partnership committee between public and academic sectors to study issues relevant to the electric power system.	2020-2030	Number of Partnership Committee meetings ----- Number of decisions taken	Ministry of Energy & Mineral Resources	Electric power sector institutions ----- Public and private universities. ----- Scientific research centers	

2.2. ENHANCE THE CURRENT INTERCONNECTION PROJECTS AND CONSTRUCT NEW PROJECTS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Renew the electricity energy exchange contract between Egypt and Jordan ----- Increase the capacity of the electricity interconnection line between Jordan and Egypt to 1100 MW	On going 2021-2025	Renew the electricity energy exchange contract annually ----- Increase the capacity of interconnection networks	National Electric Power Company (NEPCO)	Ministry of Energy & Mineral Resources ----- Egyptian Electricity Transmission Company (EETC)	Technical & economic Feasibility achieved ----- Availability of required funding
Re-operate Jordan-Syria interconnection line ----- The expansion of the Jordanian-Syrian electrical interconnection project	2020 2025-2030	Operate the interconnecting line ----- Increase the capacity of interconnection networks	National Electric Power Company (NEPCO)	Ministry of Energy & Mineral Resources ----- Syrian Electricity Transmission Company	Political willpower ----- Parties agreement ----- Feasibility achieved
Increase the capacity of the electrical interconnection line between Jordan and Palestine to 80 MW ----- Construct a 400 kV interconnection line from Jordan to Palestine	2020-2021 2023-2025	Supply Jerusalem District Electricity Company with 80 MW service available 24/7 ----- Operate the line ----- Amount of electricity sold annually	National Electric Power Company (NEPCO)	Ministry of Energy & Mineral Resources ----- Jerusalem District Electricity Company	Completion of all approvals required by the Palestinian side

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Implement the two phases of the Jordanian-Iraqi interconnection project (East Corridor) 400 kV. P1- 150 MW P2- 1000 MW	2020-2022 2023-2025	Operate project Phase 1 ----- Prepare Project Phase 2 feasibility studies ----- Sign Project Phase 2 agreements ----- Operate project Phase 2 ----- Amount of electricity sold per year	National Electric Power Company (NEPCO)	Ministry of Energy & Mineral Resources ----- Iraqi Electricity Company ----- Funders	Sign Project Phase 1 agreements ----- Achieve Project Phase 2 feasibility ----- Availability of required funding required
Implement the Jordanian-Saudi 400 kV Project. P1- 500 MW P2- 1000 MW	First Quarter/ 2020 Third Quarter/ 2020 2023	Sign MOU ----- Sign interconnection agreements ----- Operate project ----- Amount of electricity exchanged	Ministry of Energy & Mineral Resources ----- National Electric Power Company (NEPCO)	Ministry of Energy, Industry and Mineral Resources of Saudi Arabia ----- Saudi Electricity Company ----- Funders	Parties agreement ----- Availability of required funding
The GCC Interconnection Authority Project- GCC, Egypt, Jordan Interconnection	First Half- 2020 2025	Prepare Feasibility Study Sign agreement ----- Operate project	Ministry of Energy & Mineral Resources ----- National Electric Power Company (NEPCO)	The GCC Interconnection Authority ----- Egyptian Electricity Transmission Company (EETC)	Achieve technical and economic feasibility ----- Parties agreement ----- Availability of required funding

2.3. INTRODUCE STORAGE PROJECTS INTO THE ELECTRIC POWER SYSTEM (BATTERIES, WATER DAMS)

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Review the net metering and wheeling instructions to add storage batteries at a rate determined by the project's capacity and according to Energy & Minerals Regulatory Commission (EMRC) studies.	2020	Issued instructions	Energy & Minerals Regulatory Commission (EMRC) ----- National Electric Power Company (NEPCO)	Ministry of Energy & Mineral Resources ----- Distribution Companies	Prepare the required studies to determine the optimal alternative
Issuing electricity storage instructions	2020	Issued instructions	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	National Electric Power Company (NEPCO) ----- Electricity Distribution Companies	

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
<p>Construct an energy storage station using dam water in Wadi Mujib with a capacity of 220 MW</p> <p>A-Prepare a detailed feasibility study for the project</p> <p>B-Project implementation</p>	<p>2019-2020</p> <p>2021-2024</p>	<p>Prepare a study with clear results on the feasibility of starting an energy storage project in Wadi Mujib</p> <p>Water storage plant with a capacity of 220 MW</p>	<p>Ministry of Water & Irrigation</p> <p>Jordan Valley Authority (JVA)</p> <p>National Electric Power Company (NEPCO)</p> <p>Ministry of Energy & Mineral Resources</p>	<p>Energy & Minerals Regulatory Commission (EMRC)</p> <p>Donors / Investors</p>	<p>Achieve project Feasibility taking the needs of the electric power system</p> <p>Availability of funding or grant</p>
<p>Create energy storage projects with capacities suitable for the needs of the electrical system</p> <p>A- Identify and update system needs for storage surveys 2020-2025</p> <p>B- Implement projects 2020-2030</p>	<p>2019-2020</p>	<p>Identify the needs of the system</p> <p>Number of projects</p>	<p>National Electric Power Company (NEPCO)</p>	<p>Energy & Minerals Regulatory Commission (EMRC)</p> <p>Donors/Investors</p>	<p>Feasibility achieved</p> <p>- Availability of funding or grants</p>

2.4. REDUCE THE LOSS OF THE ELECTRIC POWER SYSTEM TO KEEP UP GLOBAL PRACTICES

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Raise KPIs of transport and distribution companies	2020-2030	KPIs post amendment	Energy & Minerals Regulatory Commission (EMRC)	National Electric Power Company (NEPCO) ----- Distribution Companies	
Develop and upgrade transmission networks and increase voltage in the electric power transmission networks	2020-2025	Technical loss ratios ----- Switching to smart grid technologies	Energy & Minerals Regulatory Commission (EMRC) ----- Distribution Companies	National Electric Power Company (NEPCO)	Feasibility achieved ----- Availability of funding
Emphasize law enforcement and disconnect an illegal electricity usage	2020-2030	Non-technical loss ratios	Energy & Minerals Regulatory Commission (EMRC) ----- -Distribution Companies		

2.5. GRADUAL TRANSFORMATION INTO SMART GRID NETWORKS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Coerce Electricity Distribution Companies with clear indication to gradually change into smart metering systems	2020-2022	30% by 2020 30% by 2021 40% by 2022	Energy & Minerals Regulatory Commission (EMRC)	Electricity Distribution Companies	Availability of required funding
Update electricity tariffs to stimulate switching to smart meters-(TOD) tariff meters	2020-2025	Updated Tarrif	Energy & Minerals Regulatory Commission (EMRC)	Ministry of Energy & Mineral Resources ----- National Electric Power Company (NEPCO) ----- Electricity Distribution Companies	

2.6. ENHANCE EXPANSION BY INTRODUCING ELECTRIC MODES OF TRANSPORTATION

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Sufficient of electric charging stations	2020-2030	Number of charging stations	Energy & Minerals Regulatory Commission (EMRC)	Ministry of Energy & Mineral Resources ----- Ministry of Transport ----- Private Sector	
Set mechanisms of stimulating citizens to use electric buses and vehicles	2020-2030	Number of electric vehicles ----- Number of electric buses	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	Ministry of Transport	
The adoption of electric buses and vehicles in public transport	2020-2030	Number of electric public transport	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	Ministry of Transport ----- Ministry of Finance	Availability of required funding

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Encourage the use of electric buses by replacing old buses with electric buses	2020-2030	Ratio of replacing old buses to electric buses	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	Ministry of Transport ----- Ministry of Finance ----- Land Transport Regulatory Commission ----- Drivers and Vehicles License Department ----- Public transport companies	Availability of required funding

2.7. ENHANCE INTEGRATION BETWEEN ENERGY AND WATER SECTORS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Prepare a study on demand management for the water sector	2019-2020	Number of water pumping stations where loads can be managed ----- Electric load management ----- Effects of load management	Ministry of Energy & Mineral Resources ----- National Electric Power Company (NEPCO) ----- Ministry of Water & Irrigation/Water Authority of Jordan ----- Jordan Valley Authority (JVA) ----- Energy & Minerals Regulatory Commission (EMRC)	Supporters	Availability of data required ----- Feasibility achieved
Implement Pump storage project	2020-2030	Implementation rate	Project developer (public & private)	National Electric Power Company (NEPCO) ----- Ministry of Water & Irrigation	Feasibility achieved ----- Power system need
Encourage farmers to use renewable energy for water pumping	2020-2030	Mechanisms of motivation ----- Ratio of renewable energy use in agriculture	Ministry of Energy & Mineral Resources	Ministry of Agriculture ----- Ministry of Water & Irrigation	Support mechanism ----- Available funding

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Electricity generated from wastewater treatment plants	2020-2030	Produced electricity	Ministry of Water & Irrigation	Ministry of Energy & Mineral Resources ----- National Electric Power Company (NEPCO)	Electric power system need ----- Available funding

ELECTRICITY

PROGRAM 3: SUSTAIN THE FINANCIAL SITUATION OF THE ELECTRICITY SECTOR

3.1. MOVE FROM A SINGLE PURCHASE MODEL TO A COMPETITIVE SYSTEM

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Prepare a study on sector development to achieve a competitive structural system	2022-2021	Study and results	Energy & Minerals Regulatory Commission (EMRC) ----- Prime Ministry	Ministry of Energy & Mineral Resources ----- Electricity companies	

3.2. IMPLEMENT THE ROADMAP FOR THE FINANCIAL SUSTAINABILITY OF THE ELECTRICITY SECTOR

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Implement the measures outlined in the roadmap for financial sustainability	2020-2030	Implementation rate	National Electric Power Company (NEPCO)		Availability of required funding

OIL SECTOR

PROGRAM 1: DIVERSIFICATION OF CRUDE OIL SOURCES

1.1. DIVERSIFICATION OF SOURCES OF CRUDE OIL IMPORTS

1.1.1. CONSTRUCT AN OIL PIPELINE TO EXPORT IRAQI OIL VIA AQABA

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Complete the required procedures from all parties involved in the project and start implementation.	First Quarter / 2020	Progress rate	Ministry of Energy & Mineral Resources	State Company for Oil Projects-Iraq (SCOP)	Sign Framework Agreement
			Ministry of Oil-IRAQ	Iraqi State Oil Marketing Company (SOMO)	Sign two Host Government Agreements
			Project Developer	Energy & Minerals Regulatory Commission (EMRC)	Sign Interface Agreement
				Aqaba Special Economic Zone Authority	Reach successful financial closure
			Project Developer	Aqaba Development Corporation	Environmental Approvals
				Jordan Customs	Permit to build an oil pipeline in Jordanian territory
Operate project	First Half/2024	Transfer a million barrels a day	Project Developer	Department of Land and Survey Ministry of Environment	Complete project implementation and examination

1.1.2. Miscellaneous Liquid Terminal (PPP)

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
<p>Complete the procedures required and start implementation by the developer</p>	<p>Fourth Quarter/2019 Fourth Quarter/ 2020</p>	<p>Progress rate</p>	<p>Aqaba Development Corporation ----- Private Sector</p>	<p>Aqaba Special Economic Zone Authority</p>	<p>No effect on oil and gas berths feasibility ----- Economic Feasibility achieved ----- Prepare comprehensive and detailed plans for all stages and parts of the project ----- Sign BOT agreement between the developer and Aqaba Development Corporation ----- Availability of required funding</p>

1.2. DEVELOP OIL PRODUCTION OF HAMZA OIL FIELD

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Improve the field infrastructure	First Half/2020	Termination	Ministry of Energy & Mineral Resources	Contractor/National Petroleum Company	
Technical evaluation of previously drilled wells and determine the optimal option for well development	First Half /2020	Well evaluation report	Ministry of Energy & Mineral Resources	Contractor/Private Sector Consultant	Availability of funding ----- Hire contractor/consultant
Sign development agreement to extract oil from previously drilled wells	Third Quarter/ 2020	Quantities of oil produced	Ministry of Energy & Mineral Resources	Private Sector	Availability of required funding
Full study and evaluation	Second Half /2021	Field evaluation report	Ministry of Energy & Mineral Resources	Contractor/Private Sector Consultant	Availability of funding ----- Hire contractor/consultant
Sign development agreement to extract whole field quantity and dig new wells	First Half/2022	Quantities of oil produced	Ministry of Energy & Mineral Resources	Energy & Minerals Regulatory Commission (EMRC) ----- Private Sector	Availability of required funding

1.3. ATTRACT GLOBAL COMPANIES TO INVEST IN OIL EXPLORATION IN OPEN AREAS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Issue direct offer for utilization of oil, oil shale and strategic minerals	First Quarter/2020	Issuance of the system	Ministry of Energy & Mineral Resources	Private Sector ----- Energy & Minerals Regulatory Commission (EMRC)	
Promotion of oil projects over direct offers, conferences and related events.	Second Quarter/2020- Ongoing	Number of expression of requests	Ministry of Energy & Mineral Resources	Private Sector Jordan Investment Commission (JIC)	Private corporate interest
Sign exploration and development agreements	2020-2030	Number of contracts ----- Quantities of oil produced	Ministry of Energy & Mineral Resources	Energy & Minerals Regulatory Commission (EMRC) ----- Private Sector	Private corporate interest

1.4. ATTRACT GLOBAL COMPANIES TO INVEST IN OIL SHALE RETORTING AND EXPLORATION IN OPEN AREAS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Issue direct offer for utilization of oil, oil shale and strategic minerals	First Quarter 2020	Issuance of the system	Ministry of Energy & Mineral Resources	Private Sector ----- Energy & Minerals Regulatory Commission (EMRC)	
Divide open areas into marketable areas and prepare marketing packages	First Half/2020	Production of the final map of open areas and marketing packages	Ministry of Energy & Mineral Resources		Purchase raw material evaluation software

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Promotion of open areas through conferences	Third Quarter/ 2020-2030	Number of expression of requests	Ministry of Energy & Mineral Resources	Jordan Investment Commission (JIC) ----- Private Sector	
Sign with companies interested in utilizing oil shale	2020-2030	Number of contracts	Ministry of Energy & Mineral Resources	Private Sector	Private corporate interest
Implement operating projects through contractual documents	2020-2030	Quantities of produced oil	Private Sector	Ministry of Energy & Mineral Resources ----- Ministry of Finance ----- Ministry of Labor ----- Ministry of Interior	Availability of required funding by operating companies

1.5. ESTABLISH AND CONSTRUCT CRUDE OIL AND OIL PRODUCTS PIPELINES (PPP)

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Open the way to investment in the construction of crude oil pipelines and oil products	2020-2030	Number of projects implemented	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	Private Sector ----- Ministry of Environment ----- Jordan Petroleum Refinery Company and/or new refineries Aqaba Special Economic Zone Authority ----- Aqaba Development Corporation	Private Sector interest

OIL SECTOR

PROGRAM 2: IMPROVE THE PERFORMANCE OF THE OIL SECTOR

2.1. OPEN NEW MARKETS FOR OIL PRODUCTS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
License Marketing Companies for petroleum products according to the market need	2020-2030	Number of licenses granted according to market need	Energy & Minerals Regulatory Commission (EMRC).	Ministry of Energy & Mineral Resources ----- Private Sector	Private Sector interest ----- Study the market need for new Marketing Companies every 3 years ----- Fulfill the license requirements

2.2. ADOPT THE LATEST INTERNATIONAL SPECIFICATIONS OF OIL PRODUCTS TO THE JORDANIAN MARKET REQUIREMENT

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Adopt specifications that serve the national interest and the national economy	2020-2030	Approved specifications for oil products	Jordan Sanders & Metrology Organization (JSMO) ----- Energy & Minerals Regulatory Commission (EMRC)	Marketing Companies ----- Public and private bodies represented in the Permanent Petroleum Committee	

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Import petroleum products in accordance with international specifications	2020-2030	Number of shipments corresponding to international specifications	Jordan Sanders & Metrology Organization (JSMO) ----- Energy & Minerals Regulatory Commission (EMRC)	Marketing Companies ----- Public and private bodies represented in the Permanent Petroleum Committee	Jordan Sanders & Metrology Organization (JSMO) accreditation for international specifications
Produce petroleum products by Jordan Petroleum Refinery Company with international specifications after the completion of the Fourth Expansion Project.	2020-2023	Progress rate of the Fourth Expansion Project ----- Ratio of the refinery's commitment to the specifications of international oil products	Jordan Petroleum Refinery Company	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC) ----- Jordan Sanders & Metrology Organization (JSMO)	Complete project designs ----- Reach successful financial closure ----- Hire EPC Contractor ----- Operate project.

2.3. OPEN THE WAY FOR REFINING ACTIVITY BASED ON THE PRINCIPLES OF THE MARKET

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Open the way to create new refineries in line with the needs of the market.	2020-2030	Number of expression of requests ----- Number of implemented projects to construct new oil refineries in the Kingdom under the licenses granted.	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	Private Sector	Private Sector interest ----- Economic feasibility achieved ----- Commitment to the mechanism approved by the Council of Ministers regarding investment in refining activity ----- Complete the regulatory requirements

2.4. STRENGTHEN JORDAN'S ROLE IN PROVIDING LOGISTICS SERVICES FOR TRANSPORTING OIL PRODUCTS TO AND FROM NEIGHBORING COUNTRIES

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Achieve MOCs with Iraq, Syria, Lebanon and Palestine to establish export routes for Iraqi oil through Jordan territory	2020-2030	Number of MOUs ----- Quantities of imported and exported oil products	Ministry of Energy & Mineral Resources ----- Palestinian National Authority ----- Republic of Iraq ----- Syrian Arab Republic ----- Lebanese Republic	Energy & Minerals Regulatory Commission (EMRC) ----- Marketing Companies ----- Jordan Oil Terminals Company (JOTC) ----- Private Sector	Neighboring countries interest ----- Obtain licenses required to export petroleum products on transit basis from the Energy & Minerals Regulatory Commission (EMRC) ----- Implement the required infrastructure to export petroleum products to neighboring countries

**2.5. INCREASE STORAGE CAPACITIES OF OIL PRODUCTS TO MEET THE INTERNATIONAL STANDARDS
AND IMPROVE THE DOMESTIC LOGISTICS SERVICES**

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Issue a strategic inventory system for crude oil and petroleum products	First Half/ 2020	System version	Ministry of Energy & Mineral Resources	Energy & Minerals Regulatory Commission (EMRC) ----- Jordan Oil Terminals Company (JOTC) ----- Ministry of Finance	
Increase the storage capacities of LPG in El-Madhoona by 6 thousand tons.	Second Half/ 2021	Progress rate	Jordan Oil Terminals Company (JOTC) ----- - Energy & Minerals Regulatory Commission (EMRC)	Contractor ----- Aqaba Special Economic Zone Authority ----- Aqaba Development Corporation ----- Ministry of Environment	
The new refineries' commitment to the requirements of storing crude oil and petroleum products according to the license to be granted	2020-2030	Increase in storage capacity	Energy & Minerals Regulatory Commission (EMRC)	Private Sector ----- Ministry of Energy & Mineral Resources	License from Energy & Minerals Regulatory Commission (EMRC) ----- Availability of funding

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Open the way for investment to establish storage capacities	2020-2030	Number of implemented projects ----- ----- Quantity increased in storage capacity	Ministry of Energy & Mineral Resources ----- - Energy & Minerals Regulatory Commission (EMRC)	Private Sector	Companies interested in investment ----- Feasibility achieved
Rehabilitate tanks for the refuelling of air craft systems at King Hussein International Airport / Aqaba & Marka Airport	2021-2023	Progress rate	Jordan Oil Terminals Company (JOTC) ----- - Energy & Minerals Regulatory Commission (EMRC)	King Hussein International Airport/Aqaba ----- Marka Airport	Availability of funding ----- Improve the tariff to store and handle the loss of fuel at airports to be feasible, especially now and to recover the investment costs in rehabilitating tanks

2.6. MOVE FROM A REGULATED MARKET TO AN OPEN MARKET BY LIBERALIZING & DETERMINE CEILING PRICES OF OIL PRODUCTS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Monitor the development of the sector continuously and move from defining the prices of oil products to defining the upper limit and submit the report to the Cabinet.	2020-2021	Prepare market situation report ----- ----- Move to defining the upper limit	Energy & Minerals Regulatory Commission (EMRC)	Ministry of Energy & Mineral Resources ----- Marketing Companies ----- Private Stations	Market readiness to apply the upper limit price

NATURAL GAS

PROGRAM 1: DIVERSIFICATION OF NATURAL GAS SUPPLY SOURCES

1.1. COVER THE KINGDOM'S NATURAL GAS NEEDS OF AVAILABLE NATURAL GAS SUPPLY FROM CURRENT SOURCES

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Follow up the implementation of natural gas sale and purchase agreements signed between the National Electric Power Company (NEPCO), Egypt, Noble Energy and Shell.	2020-2030	(Received quantities / committed quantities) ≤ 1 for each supply agreement	National Electric Power Company (NEPCO)	Ministry of Energy & Mineral Resources ----- Ministry of Petroleum & Mineral Resources-EGYPT ----- Jordanian Egyptian Fajr for Natural Gas Transmission and Supply ----- Egyptian Natural Gas Holding Co. EGAS ----- Egyptian East Gas Company ----- Noble Energy ----- Shell	The buyer and seller abide by the terms of agreement
Competitive bidding by the National Electric Power Company (NEPCO) for LNG purchase from the Market SPOT	2020-2030	Number of spot cargoes	National Electric Power Company (NEPCO)	LNG supplier companies	Cargoes need

1.2. DEVELOP PRODUCTION OF RISHA GAS FIELD

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
implement the National Petroleum Company Strategic Plan	2022-2030	Increase productivity to 50 million cubic feet -----	National Petroleum Company	Ministry of Energy & Mineral Resources -----	Availability of required funding -----
	2022-2030	Increase productivity to 200 million cubic feet		National Electric Power Company (NEPCO) or any potential consumers ----- Private Sector	Successful wells ----- Market for gas consumption ----- Infrastructure to deliver gas to end consumers.

1.3. ATTRACT INTERNATIONAL COMPANIES TO INVEST IN TRADITIONAL AND NON-TRADITIONAL GAS EXPLORATION IN OPEN AREAS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Issue direct offer for utilization of oil, oil shale and strategic minerals	First Quarter/ 2020	Issuance of the system	Ministry of Energy & Mineral Resources	Private Sector Energy & Minerals Regulatory Commission (EMRC)	
Promotion of natural gas projects over direct offers, conferences and related events.	First Half/ 2020-2030	Number of companies interested	Ministry of Energy & Mineral Resources	Private Sector ----- Jordan Investment Commission (JIC)	
Sign exploration and development agreements	2020-2030	Number of contracts ----- Gas quantities produced	Ministry of Energy & Mineral Resources	Private Sector	Interest of Private Sector ----- Feasibility achieved

1.4. ASSESS POSSIBLE ALTERNATIVES TO REPLACE THE (FSRU) WITH LESS EXPENSIVE SUBSTITUTES

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Adopt the optimal alternative to substitute the FSRU	Third Quarter/2019	Adopt the optimal alternative	Ministry of Energy & Mineral Resources	Aqaba Development Corporation	
	First Quarter/2020		National Electric Power Company (NEPCO)		
Project implementation	Second Quarter/2020	Progress rate	Aqaba Development Corporation	Private Sector	Availability of required funding
	Fourth Quarter /2022		Ministry of Energy & Mineral Resources		Obtain the required regulatory and environmental approvals

NATURAL GAS

PROGRAM 2: USE OF NATURAL GAS IN VARIOUS SECTORS

2.1. CONSTRUCT THE DISTRIBUTION OF NATURAL GAS NETWORKS IN MAJOR CITIES (PPP)

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Prepare economic feasibility study to establish Natural Gas Distribution Networks Project in Amman and Zarqa Project implementation	First Half/2020	Economic feasibility study	Ministry of Energy & Mineral Resources	Department of Statistics	Availability of data required to prepare the economic feasibility study
	Fourth Quarter/2020	Complete project implementation	Private Sector	Greater Amman Municipality (GAM)	Availability of required funding
	First Quarter/2021		Energy & Minerals Regulatory Commission (EMRC)	Zarqa Municipality	
	First Quarter/2027				

2.2. SUPPORT AND ENCOURAGE THE USE OF NATURAL GAS AND COMPRESSED NATURAL GAS IN THE INDUSTRY AND TRANSPORT SECTORS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Develop the legislative environment to encourage industries switching to natural gas	2020-2022	Number of gas sector legislations	Energy & Minerals Regulatory Commission (EMRC)	National Electric Power Company (NEPCO)	Prepare required studies to determine the legislative needs
Open the way for the Private Sector to invest in the mother-daughter refuelling system (PPP)	2020-2030	Number of interested parties ----- Number of industries supplied with gas	Ministry of Energy & Mineral Resources	Private Sector	Economic feasibility achieved
Receive expression of requests from companies interested in supplying the transportation sector with the compressed natural gas (PPP)	2020-2030	Number of interested parties ----- Number of implemented projects ----- Ratio of public vehicles operated on compressed gas	Energy & Minerals Regulatory Commission (EMRC) ----- Ministry of Energy & Mineral Resources Private Sector	Private Sector ----- Ministry of Transport	Economic feasibility achieved ----- Availability of the required infrastructure: gas distribution networks, compressed gas sales stations
Switch part of the public transportation fleet to compressed gas	2020-2030	Issue a decision ----- Ratio of transportation transferred to compressed gas	Ministry of Energy & Mineral Resources	Government agencies	Provide compressed gas sales stations

ENERGY EFFICIENCY

PROGRAM 1: IMPROVE THE USE OF ENERGY EFFICIENCY IN VARIOUS SECTORS TO RANGE (9%) BY 2030 COMPARED TO THE AVERAGE ENERGY CONSUMPTION IN 2018

1.1. UPDATE AND FOLLOW-UP THE LEGISLATIONS AND THE NATIONAL ENERGY EFFICIENCY ACTION PLANS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Follow up and update the implementation of the National Energy Efficiency Action Plans (NEEAP)	2020-2030	Progress rate	Ministry of Energy & Mineral Resources	Various partners: Ministry of Public Works & Housing ----- Ministry of Local Administration ----- Ministry of Transport ----- Ministry of Water & Irrigation/ Water Authority of Jordan ----- Jordan Sanders & Metrology Organization (JSMO) ----- National Energy Research Center ----- National Building Council ----- Jordan Chamber of Industry	Complete all procedures required

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Issue an amendment to the current bylaw on regulating procedures and means of conserving energy and improving its efficiency	First Half/2020	System version	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	Private Sector ----- Government agencies concerned	
Create a partnership committee between the public and the academic sectors to study issues related to renewable energy and energy efficiency	2020-2030	Number of Partnership Committee meetings ----- Number of decisions taken	Ministry of Energy & Mineral Resources	Electric power sector institutions ----- Public and private universities. ----- Scientific research centers	
Enhance and support innovative projects, research and development to enhance energy efficiency and conservation.	2020-2030	Number of projects submitted ----- Number of implemented projects	Ministry of Energy & Mineral Resources	Energy & Minerals Regulatory Commission (EMRC) ----- Electricity companies ----- Private Sector ----- Public and private universities	Availability of required funding

1.2. IMPROVE ENERGY EFFICIENCY OF THE DOMESTIC, INDUSTRIAL, GOVERNMENT, COMMERCIAL AND SERVICE SECTORS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Mandatory activation of energy building codes	2020	Regular mechanisms for construction codes	Ministry of Public Works & Housing/National Construction Council	Ministry of Energy & Mineral Resources ----- Municipalities ----- Greater Amman Municipality (GAM) ----- Jordan Engineers Association (JEA) ----- Distribution Companies	Response of responsible parties to apply energy building codes
Replace all lighting units in all the streets of the Kingdom with energy-saving units	2020-2022 2022-2030	Replace (400) thousand bulbs in all municipalities of the Kingdom ----- - Number of new bulbs to be installed.	Municipalities ----- Ministry of Public Works & Housing Greater Amman Municipality (GAM)	Ministry of Energy & Mineral Resources	Availability of required funding

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Motivate consumers to replace old bulbs with energy-saving ones in all sectors (industrial, commercial, domestic).	2020-2030	Number of replaceable bulbs (per type)	Ministry of Energy & Mineral Resources	Private Sector ----- Jordan Sanders & Metrology Organization (JSMO) ----- Electricity Distribution Companies ----- Donors	Proper support mechanisms ----- Availability of required funding ----- Sectors response
Adopt the approved energy efficiency specifications and apply it on all electric devices (imports, exports, local).	2020-2030	Adherence to the approved standards for energy efficiency	Jordan Sanders & Metrology Organization (JSMO)	Ministry of Finance/ Jordan Customs ----- Income & Sales Tax Department ----- Chamber of Commerce ----- Department of Statistics ----- Key Partners ----- Jordan Chamber of Industry	

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Compel the public sector to conduct energy audit studies and take the necessary measures to save energy	2020-2030	Adherence of government institutions	Ministry of Energy & Mineral Resources	Public institutions	Availability of required funding ----- Issuance an amendment to the current bylaw on regulating procedures and means of conserving energy
Encourage the use of solar thermal energy and bioenergy in the industrial sector to obtain the thermal energy required for industrial processes and other thermal uses.	2020-2030	Number of factories converting to renewable energy use for heat generation ----- Energy savings achieved due to transformation	Ministry of Energy & Mineral Resources	Ministry of Industry Trade & Supply ----- Chamber of Industry ----- Industrial Sector ----- Private Sector Donors	Proper support mechanisms ----- Availability of required funding ----- Industrial sector response
Encourage the use of solar, and thermal energy in public buildings, military facilities, logistic and commercial buildings for water heating systems and steam production (PPP)	2020-2030	Number of establishments ----- Installing solar thermal systems ----- Total installed capacity Energy savings achieved from energy consumption	Concerned government agencies with the Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	Private Sector Donors	Availability of required funding ----- Sectors response

1.3. IMPLEMENT AND IMPROVE ENERGY EFFICIENCY PROGRAMS IN THE WATER SECTOR TO REDUCE THE ELECTRICITY DEMAND TO 15% BY 2025

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Implement projects related to improving energy efficiency in the water sector.	2020-2025	Reduce electricity demand	Ministry of Water & Irrigation ----- Jordan Valley Authority (JVA)	Donors	Availability of required funding
Utilize existing dams to construct hydroelectric plants	2020-2030	Number of installed hydroelectric power stations	Ministry of Energy & Mineral Resources ----- Energy & Minerals Regulatory Commission (EMRC)	Ministry of Water & Irrigation ----- Jordan Valley Authority (JVA)	Availability of required funding

1.4. ENHANCE AND OPTIMIZE PUBLIC TRANSPORTATION, RAPID BUS AND RAILWAY TRANSIT SYSTEMS

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Implement of the study of the urban transport project (Irbid - Zarqa - Madaba - Salt)	2020	Phase one report (preliminary study): 100%	Ministry of Transport	Land Transport Regulatory Commission ----- Municipalities Public transport companies	Provide support required

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Upgrade public transport -bus fleet to comply with the gradual implementation of the hierarchical network levels	2020-2021	The expected number of buses and midi-buses by the end of 2020: 210	Land Transport Regulatory Commission	Ministry of Transport ----- Public transport companies	Local market capacity to meet the operators needs ----- Provide the required funding to purchase new vehicles ----- Provide the required incentives for the replacement upgrade
Public transportation project to connect Amman and Zarqa/ BRT buses	2020-2021 Implement infrastructure works (first package - sixth package)	Establish Bus Rapid Transit System between Amman & Zarqa by 2021:100%	Ministry of Transport	Ministry of Public Works & Housing ----- Greater Amman Municipality (GAM) ----- Land Transport Regulatory Commission ----- Social Security Investment Fund , Zarqa Municipality ----- Ministry of Planning & International Cooperation	Funding continuity required

Procedure	Time Frame	Key Performance Indicator (KPI)	Concerned Party	Key Partners	Prerequisites
Implement Aqaba rail link line project and connect it to El-Madhoona land port and the Saudi borders	2020-2025	Project progress rate	Aqaba Special Economic Zone Authority ----- Aqaba Development Corporation ----- Private Sector	Ministry of Transport	Financing through Aqaba Special Economic Zone Authority ----- Find an investor
Rail connection (Northern Jordan, Syria, the Iraq borders)	2020-2030	Project progress rate	Ministry of Transport	Land Transport Regulatory Commission ----- Private Sector	Availability of required funding