



ANNEX C1- Twinning Fiche

Project title: Strengthening the Institutional Capacity of the Palestinian Energy And Natural Resources Authority (PENRA) and of The Palestinian Electricity Regulatory Council (PERC)

Beneficiary administration: Palestinian Energy And Natural Resources Authority (PENRA) and the Palestinian Electricity Regulatory Council (PERC)

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TWINNING TOOL

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List of Acronyms

AP	Action Plan
BC	Beneficiary Country
DisCo	Distribution Company
EC	European Commission
EE	Energy Efficiency
ENP	European Neighbourhood Policy
EU	European Union
EUMS	EU Member States
EUMP	Electric Utility Management Project
EuroMed	Euro-Mediterranean Partnership
GEDCO	Gaza Electricity Distribution Corporation
GW	GigaWatt
GWh	GigaWatt hour
HV	High Voltage
KE	Key Expert
LV	Low Voltage
MEDREG	Mediterranean Energy Regulators
MOs	Market Operators
MS	Member State
NEDCO	Northern Electricity Distribution Company
PA	Palestinian Authority
PAO	Programme Administration Office
PENRA	Palestinian Energy and Natural Resources Authority
PERC	Palestinian Electricity Regulatory Council
PETL	Palestinian Electricity Transmission Company
PL	Project Leader
PSC	Project Steering Committee
RES	Renewable Energies
RTA	Resident Twinning Adviser

1 Basic Information

1.1 Programme

Programme: ENI/2019/41164 "PEGASE: Direct Financial Support to Recurrent Expenditures of the Palestinian Authority", and ENI/2020/42015 "PEGASE: Direct Financial Support to Recurrent Expenditures of the Palestinian Authority" Direct Management.

For UK applicants:

Please be aware that following the entry into force of the EU-UK Withdrawal Agreement¹ on 1 February 2020 and in particular Articles 127(6), 137 and 138, the references to natural or legal persons residing or established in a Member State of the European Union and to goods originating from an eligible country, as defined under Regulation (EU) No 236/2014² and Annex IV of the ACP-EU Partnership Agreement³, are to be understood as including natural or legal persons residing or established in, and to goods originating from, the United Kingdom⁴. Those persons and goods are therefore eligible under this call.

1.2 Twinning Sector

Twining Sector: ENERGY (EY)

1.3. EU funded budget

EUR 2 000 000

1.4 Sustainable Development Goals (SDGs): 7. Affordable and Clean Energy: Access to renewable, safe and widely available energy sources for all

¹ Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community.

² Regulation (EU) No 236/2014 of the European Parliament and of the Council of 11 March 2014 laying down common rules and procedures for the implementation of the Union's instruments for financing external action.

³ Annex IV to the ACP-EU Partnership Agreement, as revised by Decision 1/2014 of the ACP-EU Council of Ministers (OJ L196/40, 3.7.2014)

⁴ Including the Overseas Countries and Territories having special relations with the United Kingdom, as laid down in Part Four and Annex II of the TFEU.

2 Objectives

2.1 Overall Objectives

The overall objective is, in line with the SDG 7 objective, to support the Palestine⁵ energy public sector to 'Ensure access to affordable, reliable, sustainable and modern energy for all in Palestine' responding to citizens' needs, including those of marginalised groups.

2.2 Specific objectives

SO.1. The Palestinian Energy and Natural Resources Agency (PENRA) strengthens its organisational, administrative, technical and legal capacity as a policy maker to enable the delivery of more efficient and needs based services in line with EU ROF energy sector 2018 as agreed between the EU and PA

PENRA will strengthen the organisational, administrative, technical and legal capacity of the PA energy sector to manage the energy sector towards its independence, sovereignty and sustainability, in line with the current sector strategy objectives.

SO.2. The Palestinian Electricity Regulatory Council (PERC) strengthens its, technical and legal capacity as regulator to enable the delivery of more efficient and needs based services in line with EU ROF energy sector 2018 as agreed between the EU and PA.

PERC will strengthen the technical and legal capacities to sustainably and effectively regulate the energy sector in Palestine, in accordance with international standards in the electricity sub-sector in particular. PERC is an independent regulatory body within the Palestinian Authority.

2.3 The elements targeted in strategic documents

The need to improve the PA's public sector and the energy sector in particular represents a crucial priority, as acknowledged both in the **Palestinian National Policy Agenda 2017-2022**⁶ and in the **European Joint Strategy in Support of Palestine 2017-2020**⁷

The Interim Association Agreement on Trade and Cooperation concluded between the EU and the Palestine Liberation Organisation (PLO) on behalf of the Palestinian Authority in 1997⁸, specifies cooperation on energy as:

⁵ This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue

⁶ Final Draft State of Palestine: 2017-22 National Policy Agenda, Putting Citizens First, https://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/palestine_draft_final_npa.pdf

⁷ Pillar IV "Access to Self-Sufficient Water and Energy Services, European Joint Strategy in Support of Palestine, https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/european_joint_strategy_in_support_of_palestine_2017-2020.pdf

⁸ https://trade.ec.europa.eu/doclib/docs/2019/june/tradoc_157923.pdf

“to help the West Bank and Gaza Strip acquire the technologies and infrastructures essential to its development, particularly with a view to facilitating links between its economy and that of the Community. The priority areas of cooperation will be:

- the promotion of renewable energies,*
- the promotion of energy-saving and energy efficiency,*
- support to operations designed to facilitate the transit of gas, oil and electricity,*
- and applied research into data bank networks in the economic and social sectors linking Community and Palestinian operators in particular, and*
- support for the modernization and development of energy networks and for their link-up to Community networks.”*

Such objectives are also outlined in the "EU-Palestinian Authority (PA) Action Plan"⁹.

In line with the strategic objectives of the co-operation between the Palestinian Authority and the EU, the Multi-annual Action Document for "PEGASE: Direct Financial Support to Recurrent Expenditures of the Palestinian Authority 2018, 2019 and 2020" specifies the overarching rationale of the proposed intervention as “to build effective and accountable institutions ready for statehood and enable inclusive social development”. The specific objective of the EU support is to improve the PA public services responding to citizens' needs, including those of marginalised groups. The action responds to the aim of consolidating the PA in its general governance capacity, with selected governmental ministries and agencies benefiting from Technical Assistance support and from EU Member States expertise through the Twinning instrument. Discussions conducted between the EU and the Palestinian authorities in 2017 confirmed that energy was among the PA main indicative priority areas for Twinning support.

3 Description

3.1 Background and Justification

Background

Palestine has been marked by the ongoing Palestinian-Israeli conflict, as well as by the disruption of fifty years of occupation and the progressive fragmentation of its territory, including the illegal annexation of East Jerusalem. Regular cycles of violence and wars have led, amongst others, to the construction of an illegal separation barrier beyond the 1967 border since 2002. The movement restrictions imposed by Israel on the Gaza Strip since the early 1990s intensified in June 2007 with its closure and imposition of the land, air and sea closure.

The Oslo Accords, under which the Palestinian Authority (PA) was created in 1994, were intended to lead to a final negotiated settlement between the parties. Nearly twenty five years after, the PA, which has operated as a transitional authority with limited jurisdiction since its creation, has full civil and security authority only in 18% of the West Bank.

⁹ Council Decision (EU) 2019/222 of 20 December 2018.

Palestine is home to 5 million people, of which 3 million live in the West Bank (including East Jerusalem), and the remaining 2 million live in the Gaza Strip. Two out of five Palestinians living in Palestine are refugees; 40% of the population is under 14 years old and almost 70% of the population is younger than 30, while around 4% is over 65 years old.

Palestine runs under the framework of a customs and monetary arrangements with Israel are regulated by the Paris Protocol. Palestine has no control over its own borders and suffers from restrictions and controls on the movement of its people, goods and resources (land, water, etc.). The PA has therefore limited control over the majority of its revenues and suffers from substantial revenue losses under the current revenue sharing arrangements.

This takes place in the context of a growing governance challenges on the Palestinian side. The last general elections held in January 2006 led to the inter-Palestinian split between Fatah and Hamas. After a violent confrontation in the summer of 2007, the Gaza Strip came under the de facto control of Hamas, with whom the majority of the international community has adopted a no-contact policy. As a consequence of this split, the work of the Palestinian Legislative Council (PLC) was suspended. No new legislative measures have been adopted by the PLC subsequently, with legal acts being promulgated instead by presidential decrees applicable only to the West Bank.

Palestine relies primarily on imports from Israel to meet its electricity needs. The Gaza Power Plant (GPP) is the only large-scale generation in the Palestinian Territories with a 140 MW capacity, and its operation relies on diesel imported from Israel. In the last 2 years local RE generation has reached 20 MW in Gaza Strip and 40 MW in West Bank.

Energy supply is currently restricted by supply connections from Israel, Jordan and Egypt, with Israel being the main electricity supplier. For hydrocarbon products Israel imposes quality restrictions on imports from Jordan and Egypt, which means that Israeli companies are the only suppliers. The small gas fields offshore to Gaza have not yet found developers and would face competition from the larger gas fields of Israel and Egypt.

Palestine energy needs places it among the ENI South countries considered as main energy importer in terms of main objectives: to meet the growing demand for electricity and transport, to find and develop new cheap resources of fossil fuels at home, to reduce the amounts of imports, to reduce the costs of imports on the state budget, and to meet the Climate Change targets.

According to the latest scenario analysis (World Bank, 2017), the demand for energy (both electricity for domestic appliances and for private transport) is growing at a rate similar to that of more prosperous neighbouring countries (2.9% in the West Bank and 4.9% in the Gaza Strip). Demand for industry forms yet a rather small part of total energy demand, because of the conditions imposed by Israel on the Palestinian economy.

Energy crisis is particularly severe in Gaza, and solutions are researched in order to secure a sustainable supply to the newly built desalination plant NGEST, but also for the regional desalination plant in the EU pipeline.

The energy sector of Palestine is the main responsible of Palestine's GHG emissions with two third of the total Green gas (Gg) CO₂ eq. emissions, of this part 97% is made of CO₂ and all emissions arose from fuel combustion. By subsector, the largest contributor to the energy sector's emissions is the transport sector (47%), residential (30%) energy industries (20%). The trend shows an increase in future in line with the projected increase of the population (2,4% per year).

– **Palestinian and Natural Resources Authority (PENRA)**

PENRA is the policy maker for the energy sector and has responsibility of “Setting the general rules and policies related to the energy sector and present them to the Council of Ministers for approval”

PENRA sets sector policies, issues licences and tariffs/connection fees, and has clear competencies on Renewable Energy (production, tariffs) and Energy Efficiency. PENRA has limited competencies in the hydrocarbon sector (e.g. natural gas for electricity generation). Such competencies are anticipated to be required in the near future should Palestine start importing natural gas for energy use including power production.

As a result of several previous activities and support, PENRA is currently conducting several important projects:

- PENRA is active in technical monitoring and energy planning for reasons of security of supply. However no consolidated report on the energy sector is produced.
- PENRA is also responsible for monitoring supplies related to electricity distribution components. However, there is no specific structure for reporting and no asset management system (existing system is cash and not liability based).
- As part of a previous project a methodology for the valuation of distribution companies has been developed and is being utilised. PENRA is in need to better monitor distribution, improve quality of electricity supply, define limits for Renewable Energy Systems (RES) and recommend improvements in the distribution networks.
- As part of previous support an electricity transmission system operator has been established (PETL), also acting as the single buyer negotiating with the Israeli Electricity Company. PENRA is the supervisor of the negotiating process. A lot of effort is still required at utility level to understand the single buyer model and adopt it.
- PENRA issues licenses to RES plants and for conventional plants. Although these efforts are in a reasonable level of maturity further practical experience would be beneficial.
- A feed-in tariff model and a net-metering scheme is also in place for RES plants.
- Energy Efficiency is important for Palestine given its import dependence, lack of indigenous sources and cost of purchased electricity. Energy labelling standards are needed.
- Regarding the hydrocarbon sector, negotiations for the conclusion of a gas supply agreement with Israel and the development of necessary infrastructure are on-going. Knowledge and understanding on the management of the natural gas sector specifically for electricity generation is required.
- PENRA needs to build up its capacity in project financing and financial modelling. PENRA has to enhance its communication with end consumers, and all relevant stakeholders and reporting skills, this is notably necessary for donor funding and for encouraging private investments.

– **Palestinian Electricity Regulatory Council (PERC)**

PERC is the centre of the strategic relations between the different stakeholders in the sector.

The Palestinian Electricity Regulatory Council (PERC) was established in 2010. PERC's objective is to regulate the Palestinian electricity sector taking into consideration the interests of the consumers and the electricity companies. The following points illustrate the main tasks of PERC as stated in the general electricity law:

- PERC is responsible for setting the tariffs basics of calculations and tariffs calculations.
- PERC ensures the prevention of monopoly
- PERC strengthens the competition within all the sector activities.
- PERC reviews the licensing applications
- PERC monitors the sector and ensures the quality of the services, as well as monitors the companies' commitment with licences conditions.
- PERC resolves disputes between different parties within the sector.
- PERC monitors the performance of companies and issue the key performance indicators reports.
- PERC disseminates the information about the sector.
- PERC issues regulatory instructions to regulate the market.
- PERC monitors all the agreements that signed between different parties within the sector.

PERC needs to continue skill development in effective regulation of the electric sector, notably in developing RE regulations, tariffs, and incentives, monitoring the distribution companies and better interaction with the public by improving the communication with and awareness of electric service consumers.

The Palestinian Electricity Regulatory Council (PERC) was appointed in 2010. PERC's objective is to regulate the Palestinian electricity sector without prejudice and by balancing the interests of producers and distributors of electric power.

PERC is responsible for annual tariffs review which are recommended to PENRA for approval, review in order to match the interest of customers and electric companies, and to prevent monopoly pricing. PERC reviews and monitors the applications for electricity tariffs. PERC regulates the electricity sector including the distribution companies and ensures their compliance with license terms as well as ensures that they operate according to technical standards. PERC recommends the issuance of electricity generation, and distribution licenses to PENRA. PERC is also managing customer complaints and resolving any potential disputes between the parties.

PERC needs to continue skill development in effective regulation of the electric sector, notably in developing RE regulations, tariffs, and incentives, monitoring the distribution companies and better interaction with the public by improving the communication with and awareness of electric service consumers.

PERC plans to install a Strategic Information System (SIS) which is an online analytical processing and business intelligence software.

- Plans to install a system to enhance the flow of information and data from DISCO's to PERC
- Plans to generate their own reports, statistics and analytical processing

In addition, the system will give DISCO's the ability to access PERC data, such as periodic reports, information on tariffs, etc.

The theory of change and intervention logic of this project relates to PERC obtaining necessary assistance to continue skill development in effective regulation of the electric sector. In the activities related to renewable energy it will assist PERC staff in developing new and modifying existing RE regulations, tariffs, and incentives. The existing experience in monitoring the distribution companies will be further enhanced through revised benchmarking procedures as well as implementation of modified key performance indicators and following to be developed guidelines.

A great deal of attention will be dedicated to practical approaches to better interaction with the public by improving the communication with and awareness of electric service consumers. Better uniform complaint filing and processing procedures will be drafted and implemented throughout the electric service providers.

3.2 Ongoing reforms

The reform process of the energy sector started in the 90's. PENRA has made serious progress related to both internal governance, by adopting a regular restructuring and also on several activities in the energy sector as for example monitoring of the distribution companies, market organisation and establishment of a transmission system operator and a single buyer model, licensing regulation, net metering and feed-in-tariffs, licensing new IPPs', promoting renewable energy and several actions regarding energy efficiency as describe in Section 2.5. PENRA is now staffed with well-educated personnel, fluent in English and knowledgeable of the EU processes. At this stage further reforms are possible and would need to be supported so that the momentum is maintained.

Similarly, PERC has been actively involved in the regulation of the electric sector. Over the past several years it proposed to PENRA variety of tariffs intended to spur the development of renewable energy. It has also been involved in developing and implementing performance indicators in order to better assess the operation of the distribution companies-a feature important in setting tariff for electric services. The process of licensing of companies, providing the electric service is on-going. Current Electricity Law obligates the local authorities, which includes municipalities, to join the distribution companies and thus fulfil their obligation to pay for electricity to their suppliers.

The **main legal and regulatory framework** in the Electricity Sector consists of the following:

- **Law Nº 12/1995** regarding the establishment of the PENRA as an independent institution, with its own budget and under the guidance of the President of the Palestinian National Authority.
- **General Electricity Law, No. 13/2009¹⁰**. This law defines new institutions and their duties inside the electricity sector (PERC, NTC), establishes open licensing system for generation and distribution (with non- integration between generators and distributors), defines PETL as the Single Buyer in the system, and obliges all agents in the sector to be registered commercial companies (even PETL that will continue to be a State owned monopoly).
- **First Amendment to General Electricity Law¹¹** setting the levels of monetary penalties
- **Second Amendment to General Electricity Law¹²** modifying provisions of PERC's financing

¹⁰ Decree no. 13 of 2009 on General Electricity Law

¹¹ First Amendment (August 16, 2012)

¹² Second Amendment (January 10, 2018)

- **Third Amendment to General Electricity Law¹³** addressing distribution companies' compliance with license terms
- **Electricity tariff Law No. 04/2012.** This is the law determining the selling price of electricity to consumers by electricity companies. It has been determined on the basis of transparency and fair issues for the licensed distribution companies and customers and tariffs are set by the Palestinian Electricity Regulatory Council (PERC).

3.3 Linked activities

The Twinning project will be implemented in close cooperation with ongoing interventions to ensure synergy and no overlaps with ongoing activities/projects.

Financial support allocated by all European donors to energy projects in Palestine over the last decade amount to an estimated total of EUR 186 M¹⁴. Data includes all projects completed, ongoing or under development over the period 2008-2018. Most of the funds granted by European donors to the electricity sector between 2008 and 2018 have been channelled through the "Electric Utility Management Project (EUMP)", a technical and financial support provided bilaterally and coordinated mainly through the World Bank, the EIB and the EU which also provided support in the form of technical assistance.

PERC and PETL were established respectively in 2010 and in 2014 through the EU technical assistance support 2011-2014 'Institutional Development and Electricity Sector Reform'. A further EU 'Technical Assistance (2014-2016) for the restructuring of the Palestinian Hydrocarbon sector' helped PENRA to develop the preliminary frame to further the institutional reform process towards a sustainable energy sector. Through this EU TA, a draft sustainable energy law was drafted.

Other ongoing EU and EIB projects from 2018 are detailed in Annex VII. The portfolio of projects developed reflects the variety of strategies and priorities identified by the PA and will be monitored referring to the joint Result Oriented Framework to which also this Twinning program intends to align.

EU regional projects such as the ongoing CLIMAMED, MEDREG, MEDTSO, MEETMED programs, are complementarily supporting Neighbourhood South countries, with a view to replicate best practices and successful models on a larger scale in Palestine.

Several donors, including the Czech Republic, the Netherlands, Italy, KfW, the EU, and Norway, are also involved in small to medium-size projects to provide renewable energy (often solar PV or biogas-to-electricity), to specific beneficiaries (e.g. schools, hospitals), or remote or deprived communities.

The World Bank is very active in the Palestinian energy sector through a number of programs financed in the context of the Multi Donor Trust Fund, with interventions aiming at restructuring and upgrading distribution and transmission infrastructure but also measures enhancing the energy sector governance towards the sector credit worthiness new policy and DISCOs revenue protection.

The World Bank has launched in 2017 a two phases Electricity Sector Performance Improvement Project and has most recently started a multiyear program ASPIRE furthering

¹³ Third Amendment (July 18, 2018)

¹⁴ Taking into account indirect contributions made by European donors through the World Bank multi-donor funds this amount reaches approximately EUR 197 mln.

efforts towards the sector reform and better performance: financial support is provided in the form of grants most of them in direct management by the Programme Management Unit established within PENRA and financed by the World Bank.

In 2017 through the Office of the Quartet the PA has enhanced the focus of donors in support of the development of the gas to electricity infrastructure in the Gaza Strip, the EU and the NL are since then closely involved in the project. An EU long term technical assistance helping PENRA in the set-up of the hydrocarbon market and institutions will bust efforts towards the hydrocarbon sector reform as of 2021.

3.4 List of applicable European Union acquis¹⁵

Potentially relevant EU regulations are listed below, nevertheless it is considered that most of the EU benchmarking is not applicable in Palestine given the very specific market context, we therefore list them here below only for informative purpose and to solicit using them for complement when dealing with the specific areas touched upon by these regulations.

(Energy Efficiency)

- Directive 2012/27/EU of 25 October 2012 on energy efficiency
- Directive 2010/31/EU of 19 May 2010 on the energy performance of buildings
- Regulation (EU) 2017/1369 of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU

(Electricity)

- Regulation (EC) 714/2009 of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity
- Regulation (EU) 543/2013 of 14 June 2013 on submission and publication of data in electricity markets
- Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators
- Regulation (EU) 2016/1447 of 26 August 2016 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules
- Regulation (EU) 1227/2011 of 25 October 2011 on wholesale energy market integrity and transparency

(Gas)

- Regulation (EU) 1227/2011 of 25 October 2011 on wholesale energy market integrity and transparency

(Energy security of supply)

¹⁵ <https://energy-community.org/legal/acquis.html>

- Directive 2005/89/EC of 18 January 2006 concerning measures to safeguard security of electricity supply and infrastructure investment

(Renewable Energy)

- Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources

(Energy statistics)

- Regulation (EC) 1099/2008 of 22 October 2008 on energy statistics

3.5 Components and results per component

The results to be achieved under this Twinning are detailed below for each one of the mandatory results. There are two main beneficiaries in this Twinning: PENRA and PERC; each entity will be targeted separately through the respective result / component and several sub-results.

The following **4 Components (Mandatory Results)** will contribute to achieving sub-results described (not exhaustive list):

Component 1: Strengthening of the administrative capacities of PENRA

Sub-result 1a) Strengthened administrative capacity and raised awareness on the role of PENRA.

This component should notably include the reinforcement of capacities in monitoring and reporting skills including communication and regular reporting in English. The latter is a necessity for donor funding and for encouraging private investments. It will also support the communication of PENRA towards public, a strategy for raising awareness on the role of PENRA is to be established.

Sub result 1b): Strengthened capacity of PENRA on inventory monitoring, internal reporting and IT systems

It is expected that the Twinning will allow reinforce PENRA staff competence and internal management of information relating to inventory monitoring and reporting. It could notably contribute to put in place regular reports on material stored in warehouses, business continuity plan protocols for data security and protection, systems performance reports and IT audits.

Component 2: Strengthening of the Policy making and technical capacities of PENRA

Sub-result 2a) Strengthened policy making and technical & financial capacity of PENRA regarding electricity distribution.

It is expected that the Twinning allows to reinforce technical capacities of PENRA regarding the oversight of electricity distribution companies and their financial management. It should notably allow the revision of the legal framework regarding the obligations of distribution systems operators, the definition of a roadmap for efficiency improvements and the drafting

of legal documents related to the operation of distribution systems (including technical standards).

Sub result 2b): Strengthened policy making and technical & financial capacity of PENRA regarding electricity transmission.

It is expected that the Twinning allows to reinforce technical capacity regarding the oversight of electricity transmission companies and their financial management. It could notably include a revision of the *legal framework regarding the obligations of transmission system operators (TSOs); the definition of transmission system operators' 10-year development plans; the reinforcement of PENRA capacities regarding technical issues related to transmission.*

Sub result 2c): Strengthened policy making and technical capacity of PENRA regarding energy reform planning, RES and Energy Efficiency.

It is expected that the Twinning allows to reinforce technical capacity for the further development of renewable energy and energy efficiency in Palestine, also including technical requirements on inventory monitoring, and internal reporting and IT systems. It should notably include drafting of energy efficiency legislation and the framework for funding mechanisms and ESCOs. It should also include planning of the reform and building of the required institutions.

Sub result 2d): Strengthened capacity of PENRA regarding technical requirements, standards and legal framework in hydrocarbon sector

It is expected that the Twinning allows to reinforce technical capacity for the further development on hydrocarbon related topics, in particular on technical requirements, standards and legal framework. It is notably expected that Twinning contributes to enhance PENRA know how on the organisation of natural gas markets and the need for the establishment of standards, to update the Energy Law so its includes a clear role of PENRA in HC sector and a mandate for the reorganisation of the hydrocarbon sector

Component 3: Strengthening of Communication, documentation and customers management of PERC

Sub-results 3a) Improved communication and outreaching of customers

It is expected that the Twinning allows to improve interaction with the public by improving the communication and awareness of electricity service consumers.

Sub-result 3b): Improved PERC documentation system and database

It is expected that the Twinning allows to reinforce PERC documentation management in the main departments, including effective monitoring of complaints received and processed by the distribution companies. It should foresee the establishment of PERC documentation system and database.

Sub-result 3c): Improved management of consumers' complaints

It is expected that the Twinning allows to improve and uniform complaint filing, and processing by the electric service providers. It should notably allow better communication with DISCO and customers

Component 4: Strengthening of Monitoring capacities of PERC, benchmarking of distribution companies and regulatory framework for RE

Sub-result 4a): Improved definition and monitoring of Key Performance Indicators

It is expected that the Twinning allows to reinforce monitoring of the electricity and renewable energy sector operators through revised benchmarking procedures as well as implementation of modified key performance indicators, following the guidelines to be developed.

Sub-result 4b): Improved follow-up and monitoring / benchmarking of distribution companies

It is expected that the Twinning allows to reinforce the existing monitoring of the through revised benchmarking procedures as well as implementation of key performance indicators, following the guidelines to be developed. It is also expected an in depth analysis of the Incentives or penalties to be applied to electric companies based on the benchmark.

Sub-result 4c) Updated renewable energy regulations and tariffs, and revision of the incentive scheme

It is expected that the Twinning allows to reinforce PERC staff skills on effective regulation of the electric sector, in particular in renewable energy to develop new and/or modify existing RE regulations, tariffs, and incentives. It should notably allow to revise RE regulation and tariffs, define RE incentives, define a RE connection guide, and facilitate the integration of RE.

Respective log frames are included as Annexes to this document.

3.6 Means/input from the EU Member State Partner Administration(s):

The project will be implemented in the form of a Twinning contract between the final beneficiary country and EU Member State(s). The implementation of the project requires one Project Leader (PL) with responsibility for the overall coordination of project activities and one Resident Twinning Adviser (RTA) to manage implementation of project activities, Four Component Leaders (CL) and pool of short-term experts (STEs) within the limits of the budget. The RTA will work directly with the OAG. It is essential that the team has sufficiently broad expertise to cover all areas included in the project description.

Proposals submitted by Member State shall be concise and focussed on the strategy and methodology and an indicative timetable underpinning this, the administrative model suggested, the quality of the expertise to be mobilised and clearly show the administrative structure and capacity of the Member State entity/ies. Proposals shall be detailed enough to respond adequately to the Twinning Fiche, but are not expected to contain a fully elaborated project. They shall contain enough detail about the strategy and methodology and indicate the sequencing and mention key activities during the implementation of the project to ensure the achievement of overall and specific objectives and mandatory results/outputs.

The interested Member State(s) shall include in their proposal the CVs of the designated PL and the Resident Twinning Advisor, as well as the CVs of the designated component Leaders-CLs.

The Twinning project will be implemented by close co-operation between the partners aiming to achieve the mandatory results in sustainable manner.

The set of proposed activities will be further developed with the Twinning partners when drafting the initial work plan and successive rolling work plan every three months, keeping in

mind that the final list of activities will be decided in cooperation with the Twinning partner. The components are closely inter-linked and need to be sequenced accordingly.

3.6.1 Profile and tasks of the PL

The Project Leader (PL) will be responsible for the overall planning and implementation of the thrust of the MS inputs in this Twinning project and will ensure the achievement of the mandatory results.

The PL is expected to devote a minimum of 3 days per month from his home country to assess the progress of the project and 3 days quarterly in Palestine, as long as the situation allows it, for attending the steering committee meetings.

In cooperation with the Beneficiary Country Project Leader appointed by the Beneficiaries, she/he will be responsible to coordinate the Project's steering committee (PSC), which includes the RTA and representative of the Programme Administration Office (PAO) and the Office of the EU Representative.

PROFILE

The PL should have a university degree in engineering, economics, law or a related discipline, and should have at least 3 year experience at a senior managerial level in a ministry or regulatory authority of an EU MS.

QUALIFICATION AND SKILLS

- Excellent English communication skills, both spoken and written.
- PC literacy.

TECHNICAL EXPERTISE

- Strong analytical and managerial background.
- Inter-personal and communication skills; previous experience of managing multi-disciplinary and multinational team will be an asset.
- Previous experience in international projects will be an asset.

PREVIOUS PROJECT MANAGEMENT EXPERIENCE

- She/he can be a civil servant and other contractual staff of a Member State administration or a registered mandated body.
- 3 years hands on experience in developing and implementing strategies, policies and regulations in the energy sector;
- Experience in planning, developing, coordinating and conducting training programmes on behalf of ministries or regulators or system operators will be an asset.
- Experience within a European energy ministry, a regulator, a system operator, or any other type of energy authority, will be an asset.

3.6.2 Profile and tasks of the RTA

PROFILE

The RTA should have a university degree in engineering, economics, law or a related discipline, and should have at least 3years at a senior managerial level in a ministry or regulatory authority of an EU MS.

QUALIFICATION AND SKILLS

- Excellent English communication skills, both spoken and written.
- PC literacy.

TECHNICAL EXPERTISE

- Strong analytical and managerial background.
- Inter-personal and communication skills; previous experience of managing multi-disciplinary and multinational team will be an asset.
- Previous experience in international projects will be an asset.

PREVIOUS PROJECT MANAGEMENT EXPERIENCE

- She/he can be a civil servant and other contractual staff of a Member State administration or a registered mandated body. An RTA can also be a person who retired from a public institution or mandated body no more than three years before the date of circulation of this Twinning Fiche.
- 3 years hands on experience in developing and implementing strategies, policies and regulations in the energy sector;
- experience in planning developing, coordinating and conducting training programmes on behalf of ministries or regulators or system operators will be an asset;
- Experience within a European energy ministry, a regulator, a system operator, or any other type of energy authority, will be an asset.

TASKS

- Make the necessary liaisons with the different parts involved;
- Manage day-to-day operations;
- Manage the Short-Term Experts;
- Monitor project implementation and achievement of project objectives;
- Provide the PENRA/PERC/PETL with advice and technically assist the representatives of the Beneficiary administration.
- Provide PERC with advice on regulatory issues.
- Prepare interim quarterly reports and final reports to be submitted to the PL;
- Maintain close contact with the PAO and the Office of the EU Representative;
- Prepare terms of reference (ToR) for all Experts' missions.

The RTA will have a full-time project assistant for the purposes of translation, interpretation on a daily basis and general project duties at his/her disposal.

3.6.3 Profile and tasks of Component Leaders

A Component Leader will be assigned for each of the aforementioned four components. Component Leaders will ensure continuity and consistency within each of the fields concerned. The Member State shall designate for each component a short-term expert who, besides contributing directly to individual activities, acts as Component Leader and coordinates, in close cooperation with the RTA, the intervention of all other Member State experts mobilised for the same component. He will be responsible for delivering the mandatory results/outputs for the specific components.

Common tasks of Component leaders:

- Component coordination, guidance and monitoring;
- Conducting analysis of the area relevant to the component;

- Timely proposals for any corrective measures;
- Liaise with MS and PL and daily contacts with RTA counterpart

All the component leaders must have the minimum following qualifications and skills:

- University degree in similar discipline relevant to the component or equivalent professional experience of 8 years,
- Minimum 3 years of professional experience in the domain covered by the component.
- Fluency in written and spoken English.

In addition, for each component, it will be taken as an advantage if the Component leader can demonstrate the following skills and experience:

Component 1: Strengthening of the administrative capacities of PENRA

- Experience in the energy sector environment and knowledge of its fundamental economic and technological concepts
- Experience in programme management, monitoring and reporting, communication, and information management.

Component 2: Strengthening of the Policy making and technical capacities of PENRA

- Key skills to manage energy transition and tackle any challenges related to electricity distribution and transmission
- Experience in policy making and strategic planning

Component 3: Strengthening of communication, documentation and customers management of PERC

- Experience in communication and customer management

Component 4: Strengthening of Monitoring capacities of PERC, benchmarking of distribution companies and regulatory framework for RE

- Experience in development and implementation of strategies to address major issues in energy regulation and policy

3.6.4 Indicative profiles and areas of expertise of the required Short-Term Experts

3.6.4.1 Profiles of the Short term experts

Short-term experts will deliver their expertise under the overall responsibility of the Member State PL and the coordination and supervision of the RTA. Short term experts are expected to perform specific tasks/activities. The detailed expert input shall be established when setting the Twinning work plan including the drafting of Terms of Reference.

General Qualifications and Skills required of the short-term Experts:

- Relevant university degree or equivalent professional experience of 8 years,

- Minimum 3 years of professional experience in the domain for which they are mobilised,
- Experience in development cooperation; prior work in the Middle East region would be an asset,
- Fluency in English, knowledge of Arabic would be an asset.

3.6.4.2 Indicative areas of expertise, experience and competence for the short-term experts

In addition to the component leaders the following technical competences will have to be mobilised through Short term experts (the list is indicative only). Experts that collectively meet the criteria below may be proposed.

Component 1: Strengthening of the administrative capacities of PENRA

Sub-result 1.a):

- Experience with data collection and processing of energy data.
- Experience in the preparation of reports for institutions.
- Experience with the development of communication and visibility strategies.

Sub-result 1.b):

- Experience in preparing budgets.
- Experience in inventory and fixed asset management.
- Experience in advanced IT networks and communications.

Component 2: Strengthening of the Policy making and technical capacities of PENRA

Sub-result 2.a):

- Experience on drafting policy documents (regulations, codes) in electricity distribution.
- Experience with actions of institutions in increasing the efficiency of distribution companies.
- Experience with smart networks and smart grids.
- Experience with financial management in the energy sector.

Sub-result 2.b):

- Experience with regulations and codes required for managing transmission.
- Experience with transmission development plans and their evaluation.
- Experience with SCADA systems.
- Experience in overhead/ underground network design, HV substation design, protection schemes and grounding systems design, overall experience in safety rules for working on HV systems and SF6 gas handling.
- Experience with financial management of the energy sector.

Sub-result 2.c):

- Experience with long-term energy planning.
- Experience with electrification of isolated communities
- Experience with methodologies to determine RES penetration levels.
- Experience with tendering procedures for RES.
- Experience with data bases and GIS systems for RES plants.
- Experience with the development of financing schemes for energy efficiency projects.
- Experience on preparing a legal framework for energy labelling and energy efficiency in buildings regulations.

Sub-result 2.d):

- Experience with natural gas technical standards used in transmission and distribution networks including corrosion.
- Experience with energy regulation of the natural gas sector.

Component 3: Strengthening of communication, documentation and customers management of PERC

Sub-result 3.a):

- Experience with developing and implementing business and/or communication strategies

Sub-result 3.b):

- Experience with processes and activities taking place at the regulatory agency.
- Experience in designing document management systems.
- Experience in specifying the IT structure for document management systems.

Sub-result 3.c):

- Experience with evaluation and/or processing consumer complaints.
- Experience in working with customers and electric distribution companies.

Component 4: Strengthening of Monitoring capacities of PERC, benchmarking of distribution companies and regulatory framework for RE

Sub-result 4.a):

- Experience in evaluation of operational performance of electric utility companies.
- Experience in collecting and analysing large volume of data.

Sub-result 4.b):

- Experience with performing benchmarking of electric distribution companies.
Experience in assessment of distribution companies according to published indicators.

Sub-result 4.c):

- Experience in drafting energy regulations, electric tariff formulation and incentive programs development.
- Familiarity with technical requirements to connect renewable to distribution systems.
- Experience in economic evaluation of energy efficiency projects/technologies.

4 Budget

Maximum Budget available for the Grant is EUR 2 million.

5 Implementation Arrangements

5.1 Implementing Agency responsible for tendering, contracting and accounting:

The Office of the European Union Representative (West Bank and Gaza Strip, UNRWA) will be responsible for tendering, contracting, and accounting.

Contact person: Daniela SOCACIU

Programme Manager

EUREP

Tel: +972 2 541 5888

Fax: +972 2 541 5848

Email: Daniela.SOCACIU@eeas.europa.eu

5.2 Institutional framework

The Twinning project will support the two beneficiaries PENRA and PERC, who will coordinate and collaborate closely to ensure effective and efficient implementation of the project and achievement of results.

PENRA is responsible for supervising and monitoring the generation, transmission and distribution of energy, setting energy standards; research and development of alternative sources of energy. PENRA is also the agency accountable to the President, responsible for providing electricity at affordable prices; setting the legal, institutional, economic, financial and technical basis for system development; coordinating the sector, policy and system development, generation, transmission, distribution, tariffs and regulation; remedying system deficiencies and improving service delivery; supervising the construction, operation, and maintenance of electrical projects and networks.

PERC, established by Electricity Law in February 2010, is responsible for regulation and monitoring all activities of the electricity sector: electricity generation, transmission, distribution and sales. PERC's objective is to regulate the Palestinian electricity sector without prejudice and by balancing the interests of producers and distributors of electric power. PERC is responsible for annual tariffs review in order to match the interest of customers and electric companies, and prevent monopoly pricing. PERC reviews and monitors the application for electricity tariffs; in the case of tariff updates it sends the recommended tariffs to PENRA. According to the law the final decision on the tariffs remains with the PA Cabinet

5.3 Counterparts in the Beneficiary administration:

PENRA and PERC will assign PL and a RTA counterpart which will act as the counterparts of the EU MS PL and RTAs; *the PL and RTA counterpart will be staff of the Beneficiary administrations and will be actively involved in the management and coordination of the project.*

5.3.1 Contact Person

Eng. Abdul Hadi Barakat/Acting Planning Director

Ramallah – West Bank

PENRA building 5th floor

5.3.2 PL Counterpart

Eng. Abdul Hadi Barakat/Acting Planning Director PENRA
Ramallah – West Bank
PENRA building 5th floor

And for systematic information,

*Qais Samara, Director of Licensing in PERC
Ramallah – West Bank
PENRA building 2nd floor*

5.3.3 RTA Counterpart

Eng. Karmel Manaa / PENRA
Ramallah – West Bank
PENRA building 5th floor

And for systematic information,

*Qais Samara, Director of Licensing in PERC
Ramallah – West Bank
PENRA building 2nd floor*

6 Duration of the project

The overall execution period of the Twinning project is 27 months (as per art. 2.2 of the SC, including final reporting)¹⁶.

7 Management and reporting

7.1 Language

The official language of the project is the one used as contract language under the instrument (English).

All formal communications regarding the project, including interim and final reports, shall be produced in English.

7.2 Project Steering Committee

A Project Steering Committee (PSC) will be established at the beginning of the project comprising senior representatives of the beneficiary institutions: PENRA and PERC, European Union Representative Office, the EU MS PL, the Palestinian Prime Minister's Office, Ministry

¹⁶ Considering the nature of the project, the foreseen activities will be reviewed and agreed upon the first 3 months from the start of the implementation period.

of Finance, PETL. The PSC role will be circumscribed to funding and logistic issues during implementation. The PSC will meet at regular quarterly intervals and will submit by the end of the meetings the minutes of the decisions taken in line with the provisions of the revision 2017 – update 2018 Twinning Manual. Official minutes will be kept in English and distributed to all parties within two weeks after the PSC meeting. The PSC will be in charge of defining the technical coordination frame. It could foresee Technical Advisory Committees (TAC) –a PERC TAC and a PENRA TAC that will meet on a regular basis to support the works of the Project Steering Committee on the technical aspects of the project.

7.3 Reporting

All reports shall have a narrative section and a financial section. Reports will separately report on each one of the entities benefitting of the Twinning support. Reports shall include as a minimum the information detailed in section 5.5.2 (interim reports) and 5.5.3 (final report) of the Twinning Manual. Reports need to go beyond activities and inputs. Two types of reports are foreseen in the framework of Twinning: interim quarterly reports and final report. An interim quarterly report shall be presented for discussion at each meeting of the SC. The narrative part shall primarily take stock of the progress and achievements *via-à-vis* the mandatory results and provide precise recommendations and corrective measures to be decided by in order to ensure the further progress.

8 Sustainability

Understanding and commitment to ensure that progress is made in the process of reform, modernisation and updating of the Palestinian power sector is necessary.

The Twinning project will work closely with PENRA and PERC, in cooperation with the institutions' management and staff and necessary market players to ensure that the beneficiaries obtain a clear sense of ownership of the project. This will help ensure the sustainability of the results. The Twinning project will also develop *know how* and very specific capacities at staff level in both beneficiaries. Dissemination of this knowledge with a philosophy of "train the trainer" will help ensuring the sustainability of the results.

The project will tackle sustainability by permitting transfer of *know how* between the beneficiaries, all manuals, technical documents and reports will be prepared in partnership with PENRA and PERC officials and will continue to be used after the project's completion.

All materials and technical documents shall be translated into Arabic to maximise and ensure smooth dissemination.

9 Crosscutting issues (equal opportunity, environment, climate, etc.)

Several aspects of the Project will have a positive environmental impact with actions mitigating climate change and will be contributing towards securing access to reliable, affordable and sustainable energy in the West Bank and Gaza. This is central to improving the lives of Palestinians and to creating the conditions under which economic growth can be realized. All these actions and respective results not only have a clear and positive

environmental impact but also will result in a measurable impact towards security of energy supply and reduction in the cost of energy to the benefit of Palestinian consumers.

The Project will promote equal treatment to male, female and disabled staff at both, PENRA and PERC, in particular by providing for indicators disaggregated by gender. To the extent of the possible, other PA relevant stakeholders (EQA, PETL, DISCOs, MoF, etc.) will be involved to take part to some of the activities whenever relevant and feasible, to the extent they are concerned by the Project activities and training programmes.

10 Conditionality and sequencing Twinning

Components and mandatory results to be implemented in this Twinning are strongly related to current activities of the beneficiaries. The Twinning will fill in knowledge gaps and provide practical and timely support. More detail by beneficiary is provided in the Annex IX to the fiche.

No external conditions, including other technical assistance projects, preventing the achievement of the results of the Twinning project currently exist or are foreseen to exist during the implementation of the Project activities. Similarly, there is no need to sequence the implementation of the Components as they can be implemented in parallel, without interfering with one another. Moreover, all training activities are scheduled to be conducted within six months from the start of the Twinning, while the majority of the outputs are scheduled to be produced between the sixth and twelfth months from the start of the Twinning project. Detailed time schedule will be discussed at the beginning of the Project.

11 Indicators for performance measurement

This Twinning is meant to contribute to the PA targets; as such it will contribute to achieve:

PENRA

- SO.1.1 Implementation plan for M&E system of the Energy Strategy/Sector is endorsed by the PA Cabinet and is implemented.
- SO.1.2 A program based energy sector budget is in place by year 2022 from on going discussions wit MoF an EUREP on PFM reform.
- SO.1.3 The Sustainable Energy Law is approved by the PA President.

PERC

- SO.2.1 PERC Annual Report RE is drafted and published.
- SO.2.2 PERC competence in developing and/or updating regulations on electricity tariffs and incentives is well established
- S.O.2.3 PERC road map is designed and submitted to PERC

12 Facilities available

The beneficiary shall make available the necessary infrastructure for Member State(s) experts to carry out their tasks. The beneficiaries should provide equipped office space for the RTA, RTA assistant and short term experts. The beneficiaries are expected to set up an office unit

dedicated to the implementation of the project and to make available, free of charge, meeting rooms and space for training for the implementation of project activities and conference facilities, unless otherwise justified to use rented premises.

In the specific, for the purposes of the Twinning project, both PENRA and PERC, will allocate an office each for the use of 2-3 Twinning team Members located at their headquarters in Ramallah. The office will be equipped with all necessary equipment (printer, phone, internet access, etc.). Detailed hardware and software requirements will be discussed at the beginning of the Project. Trainings and presentations will take place in conference rooms, equipped with projector and computer.

ANNEXES TO PROJECT FICHE

- I. Logical framework matrix in standard format
- II Risk and Assumptions
- III. List of relevant Laws and Regulations
- IV. List of Agreements
- V. PENRA Organigram
- VI. PERC Organigram
- VII. Ongoing EU and EIB projects
- VIII. Detail on Twinning support Sustainability by beneficiary
- IX. Detail on conditionality and sequencing Twinning

I Logical framework matrix

Project Objectives	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
Overall Objective: <i>To contribute to support the Palestine energy public sector to deliver in line with the SDG 7 objective 'Ensure access to affordable, reliable, sustainable and modern energy for all in Palestine' responding to citizens' needs, including those of marginalised groups.</i>	<i>OO.I1. Percentage of electricity imported or purchased from non-Palestinian sources</i>	(2018) 93%	(2022) 85%	Palestinian Energy and Natural Resources Authority (PENRA) / Palestinian Central Bureau of Statistics (PCBS)	Lack of political endorsement to the overall objective.	Continuous political support and endorsement ensures that the OO is achieved.
	<i>OO.I2. Average price per kWh sold to final consumer, excluding tax (NIS)</i>	(2018) 0.50	(2022) 0.45			

Project Objectives	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
Specific Project Objectives <i>SO.1. PENRA strengthens its organisational, administrative, technical and legal capacity as a policy maker to enable the delivery of more efficient and needs based services</i>	<i>SO.1.1 Implementation plan for M&E system of the Energy Strategy/Sector is endorsed by PA Cabinet</i> <i>SO.1.2 A programme-based energy sector budget is in place by year 2022</i> <i>SO.1.3 The Sustainable Energy Law is ratified by the PA President.</i>	Plan for M&E System is not endorsed by the Cabinet. There is no programme-based energy sector budget. The Sustainable Energy Law is not yet ratified.	Plan of M&E is endorsed by PA Cabinet and is implemented. A programme based energy sector budget is established. The Sustainable Energy Law is approved by the PA President.	PENRA/PERC/Cabinet	Lack of political endorsement. Lack of ownership of Twinning process by PENRA. Lack of PENRA commitment to the Twinning objectives. Lack of time invested by PENRA to interact with the Twinning Team .	The Twinning is endorsed by PENRA at all levels. Continuous political endorsement and support to the role of PENRA. The role of PENRA in the hydrocarbon sector is clarified.

Project Objectives	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
SO.2. PERC strengthens its technical capacity as regulator to enable the delivery of more efficient and needs based services	<p>S.O.2.1 PERC Annual Report on RE</p> <p>S.O.2.2 PERC staff is autonomous in developing and/or updating regulations on electricity tariffs and incentives</p> <p>S.O.2.3 A 5-year road map for strengthening PERC technical capabilities is adopted by PERC BoD</p>	<p>PERC Annual Report on RE is out of date.</p> <p>PERC currently relies on external technical support to develop and/or update regulations on electricity tariffs and incentives.</p> <p>There is no PERC road map yet available.</p>	<p>PERC Annual Report RE is drafted and published.</p> <p>PERC competence in developing and/or updating regulations on electricity tariffs and incentives is well established.</p> <p>PERC road map is designed and submitted to PERC BoD and to the PA Cabinet.</p>		<p>Lack of ownership of Twinning process by PERC.</p> <p>Lack of PERC commitment to the Twinning objectives.</p> <p>Lack of time invested by PERC to interact with the Twinning Team.</p>	<p>The Twinning is endorsed by PERC at all levels.</p> <p>Continuous political endorsement and support to the role of PERC.</p>

Mandatory Result 1 and Mandatory Result 2 for PENRA

Indicative sub-Results by component	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
SR.1.a) Strengthened administrative capacity and raised awareness on the role of PENRA.	PENRA competencies in report and proposal writing (including financial reporting) in English.	There is no regular reporting on the electricity sector and there are no reports in English.	Regular reporting is established. English writing skills are improved at all levels. An annual training needs assessment and individual professional development plan is finalised.	The annual report on the energy sector in English as published. The Twinning final report.	Lack of PENRA commitment to the Twinning objectives. Lack of time invested to interact with the Twinning Team.	Continuous political endorsement and support to the role of PENRA
	PENRA competences on financial reporting and cash flow management.	PENRA is not fluent in preparing financing proposals with International Financing Institutions (IFI) and not proficient in financial reporting and cash flow management.	One proposal for funding with IFIs is submitted.	The annual report on the energy sector in English as published.	Limited participation of mid and lower level personnel to the Twinning Project.	PENRA personnel remain committed to the project and interact actively with the RTA and the project teams
	Public awareness on the role of PENRA;		A Cash-flow management system is procured.	The Twinning final report.	Lack of cooperation between energy companies (including distribution) and PENRA for data collection purposes.	Competent PENRA personnel is assigned to the task including younger personnel to ensure continuity and diffusion of knowledge.
	Awareness amongst potential foreign investors;	Press releases are irregular and available only in Arabic. Up-to-date information in English is not available.	A communication and visibility plan is developed. A visibility and communications			

Indicative sub-Results by component	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
		PENRA has a presence in social media (only Arabic). However, outreach to general public is questionable	<p>strategy is adopted and implemented.</p> <p>Three (3) press-releases through PENRA website and social media in English.</p> <p>The site of PENRA is redesigned to include a section in English.</p>			
<i>SR.1.b)The capacity ofPENRA regarding technical requirements on inventory monitoring, internal reporting and IT systems is improved</i>	Regular reporting from warehouses (classification information, time kept in warehouse etc.)	<p>Reporting from warehouses calls for improvement and there is no liability-based asset systems</p> <p>There is no structured reporting on the performance of IT systems, no IT audits, no business</p>	<p>PENRA develops know how on asset management system and monitoring and reporting in relation to IT.</p> <p>Monthly regular reports on material stored in</p>	<p>The annual report on the energy sector in English as published;</p> <p>The Twinning final report;</p>	This is a very technical task which calls for engagement of lower level personnel Language can be a significant barrier at lower level personnel. In this case, if higher level personnel is	Relevant PENRA personnel is committed to the project and supports this task. PENRA and PETL collaborate at all levels.

Indicative sub-Results by component	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
		continuity plan protocols. PENRA has no experience on such topics	warehouses are provided to PENRA Business continuity plan protocols for data security and protection are established Monthly database systems performance reports and IT audits are established.		involved diffusion of knowledge needs to be secured.	
<i>SR.2.a.) The technical capacity of PENRA regarding the oversight of electricity distribution companies and their financial</i>	Status of the legal framework regarding the obligations of distribution systems operators DISCOs 5-year development plans with specific	The structure of the network (small isolated distributed systems) poses several challenges. Current framework lacks obligations for efficiency improvements,	Capacity building results in measurable improvements in the performance and efficiency of distribution companies.	The annual report on the energy sector in English as published; The Twinning final report;	Lack of PENRA commitment to the Twinning objectives. PENRA personnel is not committed to the task or inadequate for the task.	PENRA and DISCOs collaborate with the Twinning team towards defining a specific path (with targets) for performance improvements (e.g. 2% in 2022)

Indicative sub-Results by component	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
management is improved.	actions targeting efficiency improvements. PENRA capacities on technical issues related to distribution	quality standards for operation and drivers to innovation. Reporting of DISCOS to PENRA is inadequate. Financial reporting needs to be improved	The legal framework regarding the obligations of distribution systems operators is clarified and enriched. Losses (commercial and technical) and collection rates are improved. PENRA adopts a roadmap for efficiency improvements. Draft legal documents related to the operation of distribution systems (including technical standards) are completed.		DISCOs do not collaborate towards recommended improvements.	

Indicative sub-Results by component	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
			<p>Distribution companies submit a 5-year development plan to PERC and PENRA.</p> <p>The efficiency of DiSCOs increases by 2% in comparison to 2019 levels.</p>			
SR.2.b) The technical capacity of PENRA regarding the oversight of electricity transmission companies, their financial management is improved. and technical know- is improved.	<p>The legal framework regarding the obligations of transmission systems operators (TSOs)</p> <p>Transmission systems operators 10-year development plans</p> <p>PENRA capacities regarding technical</p>	PENRA has very little, or no experience on the issues related to the operation of a transmission system from a legal, technical and commercial point of view	<p>Capacity building is the core of the organisation and operation of the newly built transmission system.</p> <p>Real-time SCADA reports developed by PETL become available on demand.</p>	<p>The annual report on the energy sector in English as published;</p> <p>The Twinning final report;</p>	<p>The level of cooperation between PENRA and PETL is inadequate and there is no transfer of know-how and information.</p> <p>Lack of personnel of PENRA and PETL assigned achieve necessary improvements.</p>	PENRA and PETL collaborate with other and with the Twinning team

Indicative sub-Results by component	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
	issues related to transmission		<p>A procedure for quarterly reports on maintenance and reporting of PETL to PENRA is established.</p> <p>Draft legal documents related to the operation of transmission systems (including technical standards) are completed</p> <p>A transmission development plan is submitted to PENRA</p>			
SR.2. c) Strengthened policy making	PENRA procedure for the calculation of RES penetration, limits and issues	PENRA does not calculate RES penetration limits for distribution	Draft legislation on energy labelling and is prepared	The annual report on the energy sector in English as published;	RES Limits are not calculated due to lack of adequate data (e.g. data not	The twinning is endorsed by PENRA at all levels.

Indicative sub-Results by component	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
<i>and technical capacity of PENRA regarding energy planning, RES and Energy Efficiency.</i>	<p>recommendations to DISCOs</p> <p>PENRA technical capacity to procure a GIS system for recording RES installations and a relevant database.</p> <p>Legislation related to energy labelling.</p> <p>Funding mechanism for energy efficiency investments.</p>	<p>networks and does not have a concise system/database to store the locations of RES plants.</p> <p>Although PENRA is deeply involved with other donors in the development of a RES tendering system they lack practical experience.</p> <p>PENRA is working (in collaboration with other authorities) on the preparation of draft legislation on energy labelling for air-conditioning systems</p> <p>There is a revolving fund for funding</p>	<p>and adopted by Cabinet.</p> <p>An energy efficiency fund targeting different consumer categories is designed and set up.</p> <p>A draft regulation on energy efficiency of buildings is concluded and set into public consultation.</p> <p>The Building Regulation is adopted by the Cabinet.</p>	<p>The Twinning final report.</p> <p>The annual report on the energy sector in English as published.</p>	<p>provided by DSOs). This has direct implications to RES penetration.</p> <p>PENRA personnel is not committed to obtain the required know how from the Twinning Team.</p> <p>Draft legislation is not prepared due to lack of commitment by PENRA.</p> <p>The draft legislative proposals are not finalised through the current collaboration process with other authorities.</p>	<p>Calculation of RES limits requires specific knowledge and experience on small isolated systems and cannot be provided by the Twinning team.</p> <p>The Twinning is endorsed by PENRA at all levels.</p> <p>The importance of the twining project is communicated to other Palestinian authorities that collaborate with PENRA.</p>

Indicative sub-Results by component	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
		<p>energy efficiency improvements. The fund is limited, coming to an end and further support is necessary.</p> <p>There is no framework for ESCOs or other energy efficiency</p>	<p>10 draft legal documents for labelling and eco-design are concluded and set into public consultation in two stages.</p> <p>A new funding mechanism is designed</p> <p>The funding mechanism is adopted by the Cabinet of Ministers.</p>			
<i>SR.2. d) The capacity of PENRA regarding technical requirements, standards and legal framework of the hydrocarbon sector is improved.</i>	PENRA personnel understanding of the organisation of the natural gas sector in EU Member states and on the legal framework requirements to	PENRA does not have a legally defined role in the hydrocarbon chain and lacks knowledge on all topics related to natural gas	PENRA builds know how on the organisation of natural gas markets and the need for the establishment of safety and other type of standards	<p>The annual report on the energy sector in English as published;</p> <p>The Twinning final report;</p>	This task is currently assigned to GPC: lack of a legally defined role may imply limited participation of PENRA employees in this component	Actions are taken towards the clarification of the role of PENRA in gas supply for power production.

Indicative sub-Results by component	Indicators Description	Indicators		Sources of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
	accommodate a gas market		<p>The Energy Law is modified to include a mandate for the reorganisation of the hydrocarbon sector</p> <p>The law defines a role for PENRA in the design of the technical (standards) and regulatory framework (access conditions to gas pipelines, security of supply)</p>			

Mandatory result 3 and Mandatory result 4 for PERC

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
SR.3 a) National communication strategy established	Number of Public hearing sessions organised during strategy implementation	-The current Number of Public hearings held in 2019	At least 3 public hearing per year based on the number of projects launched.	Communication strategy developed, approved and published by PERC within 6 month from the start of the Twinning.	Insufficient budget	The Twinning is endorsed by PERC at all levels
	Number of articles and reports in the local newspapers and TV programmes.	Number of articles and reports in the local newspapers and TV programmes published in 2019	Implementation of the relevant visibility events in the relevant media as per the communication and visibility plan of the project.	Number of recorded news.	Staff capacity and availability	Continuous political endorsement and support of PERC
			Creation of social media platforms for dissemination of project achievements.	Number of press releases, articles published on the media websites.	Tools capabilities	Increasing the cooperation with other governmental bodies (Tax department, Promotion agency, etc.)
			Technical capability of the staff working in	Reports and surveys.		

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
			Public Relations area increased A specialized communication strategy for PERC developed			
	Number of awareness campaigns at local or national levels (TV broadcasts and bulletins)	The current number of awareness campaigns at local/national media (tbd)	To reach (tbd) consumers and raise their awareness about consumers rights. Implementation of (tbd) visibility events in the relevant media as per the communication and visibility plan of the project.	Reports and publications Awareness impact questionnaire	Lack of financial support Inability to reach all of the consumers, especially those receiving electricity from local councils and municipalities	
SR.3b) Improved PERC documentation system and database	Computerized Archiving system	PERC has a basic system of document management and archiving, without	Full computerized documentation system	Terms of reference to implement a PERC document management system prepared and ready	Cooperation with stakeholders Budget to implement	The Twinning is endorsed by PERC at all levels

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
		centralized system or structure		for submission within 12 month from the start of the Twinning Report and data published	No infrastructure support Staff capacity	Continuous political endorsement and support of PERC Increasing the cooperation with other governmental bodies (Tax department, Promotion agency, etc.)
PERC Database established	Time needed to prepare the reports Data analysis tools established	All applications in PERC are operated manually.	Full computerised processes	Terms of reference to implement a PERC database prepared and ready for submission within 12 month from the start of the Twinning Report and data published	As above	The Twinning is endorsed by PERC at all levels Continuous political endorsement and support of PERC Increasing the cooperation with other governmental bodies (Tax department, Promotion agency, etc.)

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
SR 3c) Complaints documentation established	Complaints documentation established	A simple spreadsheet in place with the data on the status of the complaints	Two employees trained in complaints documentation To have programs for archiving the complaints data, complaints no longer handled manually. Skills to work with those programs efficiently developed	Training in complaints documentation conducted within 3 month from the start of the Twinning Archiving system in place within 6 month from the start of the Twinning Complaints-related reports prepared and published monthly after 6 month from the start of the Twinning	Lack of financial support Weakness of current procedures Staff capacity and availability	Continuous financial support Rigid awareness campaign plans
SR.4.a) Key Performance Indicators revised	Number of indicator reviewed and proposed Type of new indicators proposed	PERC has a good existing KPI report of distribution sector that needs	Three employees trained in defining and calculating KPIs Quality of service KPIs (service quality,	Training in defining and calculating KPIs conducted within 3 month from the start of the Twinning	Data collection Methods of submitting and treatment of data	The Twinning is endorsed by PERC at all levels

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
		a revision and enhancements. No KPI report for transmission sector	connection times, number of complaints), modified Financial KPIs (collection rate, payment rate, government subsidies, sector debts, debts between distributor and supplier), modified Renewable energy KPI (level of production) modified Infrastructure KPI (length of networks, number of meters, including smart meters, number of distribution	New reviewed distribution sector's KPIs prepared and published by PERC within 24 month from the start of the Twinning New transmission sector's KPIs approved by PERC within 12 month from the start of the Twinning Report on current values of KPIs issued annually	Verification of data	Continuous political endorsement and support of PERC Increasing the cooperation with other governmental bodies (Tax department, Promotion agency, etc.)

<i>Mandatory results by component</i>	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
			transformers), modified Administrative KPI (number of employees in distribution companies), modified Best practices KPI report for distribution and transmission sector			

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
SR.4.b) Improved follow-up and monitoring / benchmarking of distribution companies	Unified data submitted by DISCOs and transmission company strengthen the KPIs reporting accuracy	a general agreed procedures as summarized through meeting minutes with DISCOs	Best practices' for collecting and standardizing data among companies established 2 guides (distribution and transmission)	Guidelines on data collection published within 12 month from the start of the Twinning KPIs guides prepared and published by PERC Annual report of PERC	As above	The Twinning is endorsed by PERC at all levels Continuous political endorsement and support of PERC Increasing the cooperation with other governmental bodies (Tax department, Promotion agency, etc.)
DISCOs facility centre established	The number of consumers related to service centre	No published regulations regarding this issue	Modify the effectiveness of current service centres in electricity companies and their adequacy of the market and the provision of services evaluated by best practices The standards for the number of consumers	Evaluation report on centres effectiveness published within 6 month from the start of the Twinning Operational standards for service centres published within 9 month from the start of the Twinning	As above	

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
			related to services centres and categorize that based on locations (rural and urban areas).			
KPIs Guide prepared	<p>Number of indicators used in benchmarking</p> <p>Efficiency of the electricity services</p>	No benchmarking	<p>One new benchmarking regulations</p> <p>Performance of distribution companies assessed according to published KPIs</p> <p>Technical and non-technical losses in relevant networks reduced</p> <p>Transparent benchmarking system that enables PERC to apply incentives or</p>	<p>Training in performing benchmarking of the distribution companies conducted within 3 month from the start of the Twinning</p> <p>Final reports on benchmarking of distribution companies prepared and approved within 24 month from the start of the Twinning</p> <p>Reports on benchmarking of distribution</p>	<p>Collecting data from DISCOs</p> <p>Methodology of data collection at discos</p>	

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
			<p>penalties on electricity companies</p> <p>Benchmarks to be based on the experiences of neighbouring countries and best practices</p>	<p>companies published annually by the PERC</p> <p>Reports on technical and non-technical losses prepared and approved within 6 month from the start of the Twinning</p> <p>Reports on technical and non-technical losses published annually by the PERC</p>		
SR.4.c) Updated renewable energy regulations and tariffs	Number of renewable energy regulations and tariffs reviewed and modified	The 6 existing RE laws, tariff, and regulations adopted in 2015.	<p>Three employees trained in drafting RES regulations and calculating RES tariffs</p> <p>3 (tbc) RES regulations reviewed and modified by PERC</p>	<p>Inception Twinning report</p> <p>Modified RES regulations and tariffs <u>prepared</u> by PERC within 12 month from start of the Twinning</p>	<p>Inadequate transmission infrastructure</p> <p>Fragile distribution system</p>	<p>The Twinning is endorsed by PERC at all levels</p> <p>Continuous political endorsement and support of PERC exists</p> <p>Increasing the cooperation with other governmental</p>

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
			3 (tbc) RES tariffs reviewed and modified		Local governments do not apply electricity law Absence of renewable energy Code Absence of distribution code	bodies (Tax department, Promotion agency, etc.)
	RE installed capacities connected to the grid at incentives	Number (tbd) of Palestinian Solar Initiative projects (incentive tariffs 2012, 2013, 2015) Number (tbd) of Tax exemption projects	PERC RE goals and targets (tbd) have been met (tbd)	Reviewed incentives' regulations <u>published</u> by PERC within 12 month from the start of the Twinning	As above	As above

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
	RE Connection Guide	the existing connection fees regulation for all consumers No individual guide for RE projects	1 RE Connection Guide	RE connection Guide published by PERC within 12 month from the start of the Twinning PERC annual report about the RE	As above	As above
	Number of facilities that implemented new trends of energy efficiency solutions Proposed regulations of new trends (Energy Efficiency and Electric Vehicle)	0 0	The required infrastructure of these new systems is assessed A proper regulation that covers these systems is proposed The tariff, economic and financial impacts on the electricity market are calculated	New regulations for energy efficient systems and electric vehicles prepared within 12 month from the start of the Twinning Report on relationship between energy efficient projects and renewable energy systems prepared within 12 month from	As above	As above

Mandatory results by component	Indicators Description	Indicators		Source of Verification	Risks	Assumptions (external to project)
		Baseline	Target			
			<p>The relationship between these projects and the renewable energy systems investigated.</p> <p>Two new regulations are issued</p> <p>PERC concerned goals and targets (tbd) have been met (tbd)</p>	the start of the Twinning		
	RE expansion of connected capacities	no clear document to regulate the issue	The regulatory model of renewable energy legislation that is tied to electricity networks (transmission and distribution) developed.	The new renewable energy legislation prepared and published within 18 month from the start of the Twinning	As above	As above

Annex II - Risks and Assumptions

Risks and Assumptions for PENRA Twinning

PENRA		
Risks	Assumptions	Mitigation measures
<ul style="list-style-type: none"> ▪ Lack of political endorsement. ▪ Lack of ownership of Twinning process by PENRA ▪ Lack of PENRA commitment to the Twinning objectives ▪ Lack of time invested to interact with the Twinning Team ▪ Lack of a mechanism for diffusion of knowledge to lower level personnel ▪ Lack of a sustainability plan 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PENRA at all levels. ▪ There is continuous political endorsement and support to the role of PENRA ▪ The implementation plan for M&E system of the Energy Strategy/Sector is endorsed by PA Cabinet ▪ The programme-based energy sector budget is set timely in place ▪ The Sustainable Energy Law is ratified by the PA President. ▪ A mechanism to diffuse knowledge to lower level personnel is in place ▪ Cooperation between DISCOs and PETL and every other relevant authority is intensified. ▪ A sustainability plan is in place ▪ The role of PENRA in the hydrocarbon sector is legally clarified. 	<ul style="list-style-type: none"> ▪ Addressing issues related to lack of political endorsement will be beyond the scope and powers of the Twinning Team. It is expected that such issues will be addressed through support from the EU Delegation. ▪ PENRA high level personnel have already developed a sense of ownership in this Twinning project as demonstrated by correspondence with the consultant and participation during the workshops. ▪ Maintaining the commitment of PENRA team to the project will be sought by the RTA.

Strengthening administrative capacity and	<ul style="list-style-type: none"> ▪ Lack of PENRA commitment to the Twinning objectives. 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PENRA at all levels.
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raising awareness on the role of PENRA	<ul style="list-style-type: none"> ▪ Lack of time invested to interact with the Twinning Team. ▪ Limited participation of mid and lower level personnel to the Twinning Project. ▪ Lack of cooperation between energy companies (including distribution) and PENRA for data collection purposes. 	<ul style="list-style-type: none"> ▪ Continuous political endorsement and support to the role of PENRA
Strengthening the technical capacity of PENRA on inventory monitoring, internal reporting and IT systems	<ul style="list-style-type: none"> ▪ Limited participation of mid and lower level personnel to the Twinning Project. 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PENRA at all levels
Strengthening the policy making and technical capacity of PENRA regarding electricity distribution	<ul style="list-style-type: none"> ▪ DISCOs do not collaborate towards achieving recommended improvements or targeted improvements are infeasible. 	<ul style="list-style-type: none"> ▪ PENRA and DISCOs collaborate with the Twinning team towards defining a specific path (with targets) for measurable performance improvements
Strengthening the policy making and technical capacity of PENRA regarding electricity transmission	<ul style="list-style-type: none"> ▪ PETL and PENRA do not collaborate towards an adequate level to ensure that technical assistance to be provided is exploited in the utmost level 	<ul style="list-style-type: none"> ▪ PENRA and PETL closely cooperate throughout the Twinning.
Strengthening the policy making and technical capacity of PENRA regarding energy planning, RES and Energy Efficiency	<ul style="list-style-type: none"> ▪ RES Limits are not calculated due to lack of adequate data (eg data not provided by DSOs). ▪ PENRA personnel is not committed to obtain the required know how from the Twinning Team. ▪ Draft legislation is not prepared due to lack of commitment by PENRA. ▪ The draft legislative proposals are not finalised through the current collaboration process with other authorities. 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PENRA at all levels. ▪ The importance of the twinning project is communicated to other Palestinian authorities that collaborate with PENRA.

Strengthening the capacity of PENRA regarding technical requirements, standards and legal framework in hydrocarbon sector	<ul style="list-style-type: none"> ■ PENRA does not have a legally defined role in the hydrocarbon chain. This task is assigned to JPC. Lack of a legally defined role may imply limited participation of PENRA employees in this component 	<ul style="list-style-type: none"> ■ Actions are taken towards the clarification of the role of PENRA in gas supply for power production.
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Risks and Assumptions for PERC Twinning

The Risks and Assumptions by Component are summarised in the Table below.

PERC		
Risks	Assumptions	Mitigation measures
<ul style="list-style-type: none"> ▪ Unstable politico-economic situation ▪ Non-adoption of changes in regulations and laws ▪ Financing problems ▪ Lack of staff availability 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PERC at all levels ▪ Continuous political endorsement and support of PERC 	<ul style="list-style-type: none"> ▪ Addressing issues related to politico-economic situation will be beyond the scope and powers of the Twinning Team. It is expected that such issues will be addressed through support from the EU Delegation. ▪ It is expected that non-adoption of changes in regulations and laws will be addressed through support from the EU Delegation. ▪ PERC high level personnel have already developed a sense of ownership in this Twinning project as demonstrated by correspondence with the consultant and participation during the workshops. ▪ Maintaining the commitment of PERC team to the project will be sought by the RTA.
Improvement to national communication and reaching to a vast majority of customers	<ul style="list-style-type: none"> ▪ Unavailable budget ▪ Staff capacity ▪ Tools capabilities 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PERC at all levels ▪ Continuous political endorsement and support of PERC

PERC Documentation, PERC data base	<ul style="list-style-type: none"> ▪ Cooperation with stakeholders ▪ Budget to implement ▪ No infrastructure support ▪ Staff capacity 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PERC at all levels ▪ Continuous political endorsement and support of PERC
Improvement in consumers complaints handling	<ul style="list-style-type: none"> ▪ Inability to reach all of the consumers, especially those receiving electricity from local councils and municipalities 	<ul style="list-style-type: none"> ▪ Continuous financial support exists
Revision of Key Performance Indicators (KPI)	<ul style="list-style-type: none"> ▪ Data collection ▪ Method of submitting and treatment of data ▪ Verification of data 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PERC at all levels ▪ Continual political endorsement and support of PERC
Benchmarking of distribution companies	<ul style="list-style-type: none"> ▪ Collecting data from the DISCO's ▪ Methodology of data collection at discos ▪ Calculating the penalties and rewards 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PERC at all levels ▪ Continuous political endorsement and support of PERC
Review and modifications of the renewable energy regulations and tariffs	<ul style="list-style-type: none"> ▪ Inadequate transmission infrastructure ▪ Fragile distribution system ▪ Local governments do not apply electricity law 	<ul style="list-style-type: none"> ▪ The Twinning is endorsed by PERC at all levels ▪ Continuous political endorsement and support of PERC

Annex III - List of relevant Laws and Regulations

- **Law Nº 12/1995** regarding the establishment of the PENRA as an independent institution, with its own budget and under the guidance of the President of the Palestinian National Authority.
- **General Electricity Law, No. 13/2009¹⁷**. This law defines new institutions and their duties inside the electricity sector (PERC, NTC), establishes open licensing system for generation and distribution (with non- integration between generators and distributors), defines PETL as the Single Buyer in the system, and obliges all agents in the sector to be registered commercial companies (even PETL that will continue to be a State owned monopoly).
- **First Amendment to General Electricity Law¹⁸** setting the levels of monetary penalties
- **Second Amendment to General Electricity Law¹⁹** modifying provisions of PERC's financing
- **Third Amendment to General Electricity Law²⁰** addressing distribution companies' compliance with license terms
- **Electricity tariff Law No. 04/2012**. This is the law determining the selling price of electricity to consumers by electricity companies. It has been determined on the basis of transparency and fair issues for the licensed distribution companies and customers and tariffs are set by the Palestinian Electricity Regulatory Council (PERC).

¹⁷ Decree no. 13 of 2009 on General Electricity Law

¹⁸ First Amendment (August 16, 2012)

¹⁹ Second Amendment (January 10, 2018)

²⁰ Third Amendment (July 18, 2018)

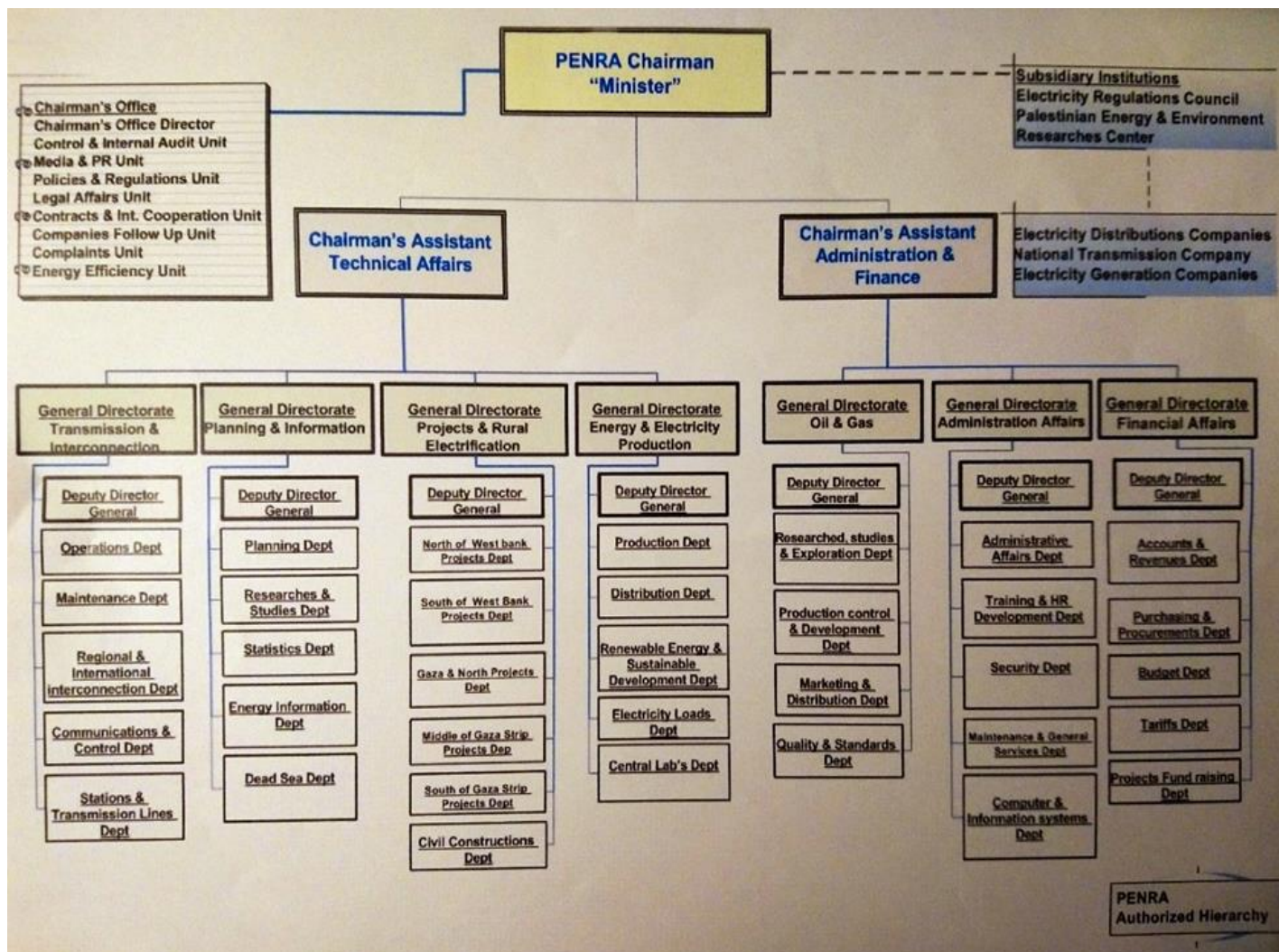
Annex IV - List of Recent Agreements

- Palestinian National Policy Agenda 2017-2022²¹
- European Joint Strategy in Support of Palestine 2017-2020²².
- ENI C(2018)7933/Annual Action Programme 2018 in favour of Palestine
- Commission Implementing Decision amending Commission Implementing Decision C(2018)1271 of 23.2.2018 on the multi-annual Action Programme for 2018, 2019 and 2020 in favour of Palestine
- Commission Implementing Decision (CID) amending CID C(2015) 5243 of 22.7.2015 on the Annual Action Programme 2015 part 2 in favour of Palestine
- Commission Implementing Decision on the Annual Action Programme in favour of Palestine for 2019
- CID amending CID C(2018) 1271 of 23.2.2018 on the Multi-annual Action Programme for 2018, 2019 and 2020 in favour of Palestine from the general budget of the Union

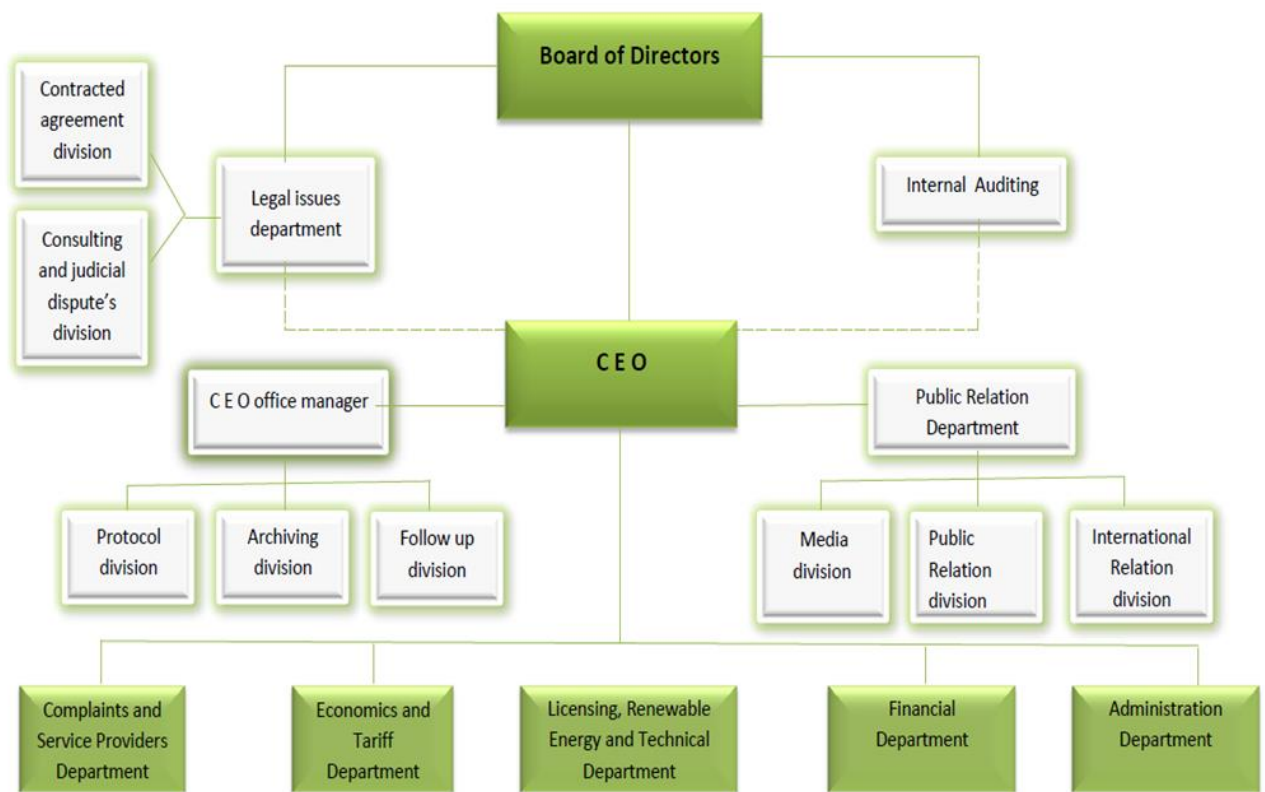
²¹ Final Draft State of Palestine: 2017-22 National Policy Agenda, Putting Citizens First, https://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/palestine_draft_final_npa.pdf

²² European Joint Strategy in Support of Palestine, https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/european_joint_strategy_in_support_of_palestine_2017-2020.pdf

Annex V - PENRA Organizational Chart



Annex VI - PERC Organizational Chart



Annex VII - ongoing EU and EIB projects

Project / Programme (status)	Implementing Partner	Amount	Objectives
<p><i>EU Twinning for the Energy Sector: Institution Building and Capacity Development of PENRA and PERC towards an independent energy sector in Palestine.</i></p> <p>Status: under preparation, CfP to be launched in June 2020, contracting Q4 2020</p>	<p><i>Direct Management by EUREP</i></p>	<p><i>EUR 1,4 Million</i></p>	<p><i>The objective is to contribute to the improvement of the quality of the energy public service with respect to programming, monitoring and evaluation, and to the enhancing of the regulatory framework towards a more efficient oversight of the electricity sector and the further development of the gas sector in the interest of the Palestinian consumers.</i></p>
<p><i>EU Administrative Agreement to contribute to the World Bank multi donor program "Advancing Sustainability in Power Sector through Integrated, Reliable and Equitable service delivery in West Bank and Gaza" (ASPIRE, - USD 200 Million, 2020-2024).</i></p> <p>Status: Negotiation on going at country level, contracting Q2 2020</p>	<p><i>Indirect Management with the World Bank Infrastructure Development MDTF</i></p>	<p><i>EUR 6 Million (50% to West Bank and 50% to Gaza Strip)</i></p>	<p><i>EUREP support aims at targeting in priority the following identified projects:</i></p> <ul style="list-style-type: none"> - Construction of the feeder lines from Tarqumya substation; - Rehabilitation of MV and LV connection points in the West Bank connecting the IEC grid to the PETL grid; - Supply and installation of smart meters in the West Bank and the Gaza Strip - ESIA Study of the 161 kv line interconnecting Nablus substation to Jenin substation; - RE and EE in the health sector in the Gaza Strip
<p><i>Support to the capacity of the Office of the Quartet: Gaza water and energy triangulation (2019)</i></p> <p>Status: on-going</p>	<p><i>Indirect Management with UNOPS</i></p>	<p><i>Around 0.3 M€ per year for energy</i></p>	<p><i>The objective is to enhance the OQ's capacity to support and facilitate improvements in the water and energy sectors in Gaza.</i></p>
<p><i>Nexus North: support towards strengthening water utilities in the North of the West Bank</i></p> <p>Status: on-going</p>	<p><i>Indirect Management with AFD</i></p>	<p><i>EUR 6 Million (excluding the water component)</i></p>	<p><i>The project includes infrastructure energy works to supply the water infrastructure with renewable energy and technical assistance to JSCs to strengthen their capacity to, operate and maintain infrastructure, and to support the implementation of sectoral reform.</i></p>
<p><i>'Moustadama': Promoting an Energy-Sustainable Palestinian Industry</i></p>	<p><i>Indirect Management with UNIDO</i></p>	<p><i>EUR 6 Million</i></p>	<p><i>This Project focuses on SMEs both on 1) improving the energy management and energy conservation practices at the enterprise-level and 2) increasing the electricity supply through renewable energy and combined heat and power applications.</i></p>

Status: on-going			
<p><i>Technical Assistance in support of the reform of the Palestinian hydrocarbon sector</i></p> <p>Status: AAP 2019 TA to be signed, procurement to be launched in 2020</p>	<p><i>Direct Management by EUREP</i></p>	<p>EUR 2 Million</p>	<p><i>This TA support is a follow-up to previous intervention which delivered several analysis of the energy sector and a draft Sustainable Energy Law.</i></p> <p><i>The objectives of this follow up TA is an improved hydrocarbon legal and regulatory framework; and an increased competence in the area of hydrocarbon transactions.</i></p>
<p><i>EIB Technical Assistance - West Bank Power Distribution Reinforcement Study and West Bank</i></p> <p>Status: on-going</p>	<p><i>EIB Direct Management with the European Resilience Initiative (ERI)</i></p>	<p>EUR 1,3 Million</p>	<p><i>Main results expected are i) Development of Tender Packages and Assistance for Procurement; ii) Assistance and coordination for the elaboration of the Distribution Utilities Network Reinforcement Investment Plan; iii) Capacity Building:</i></p> <p><i>This TA should identify a major infrastructure program for blending with EU grant in AAP 2021.</i></p>

<p><i>EIB loan agreement with PIF for PV onto the West Bank school rooftops.</i></p> <p>Status: on-going</p>	<p><i>EIB Direct Management with the European Resilience Initiative (ERI)</i></p>	<p><i>EUR 15 Million</i></p>	<p><i>The EIB's financing through a loan contract with PIF was signed in March 2019. EIB loan is used for the installation of rooftop PV panels with a total capacity of 35 MW on 500 schools dispersed throughout the West Bank and East Jerusalem. The company uses 15% of the electricity generated to power schools at no cost, as offset against using the rooftops, and sell the remaining 85% electricity at a competitive tariff to four electricity DUs</i></p>
<p><i>SUNREF PALESTINE: Sustainable Use of Natural Resources and Energy Finance</i></p> <p>Status: on-going</p>	<p><i>Indirect Management with AFD (NIF funding)</i></p>	<p><i>EUR 8 Million</i></p>	<p><i>The main objective is to support the transition of the Palestinian enterprises towards a 'Green' economy. The Action's three specific objectives are:</i></p> <ol style="list-style-type: none"> <i>1. to create and mature a market for "Green" investments</i> <i>2. to improve capacity of local banks to appraise and finance 'Green' projects by providing medium to long-term funding, grant and technical assistance.</i> <i>3. to raise public awareness for 'Green' projects among enterprises and individuals on inherent financial benefits and security of supply</i>
<p><i>EU support through Global Network against Food Crisis Partnership Program –</i></p> <p><i>Support of PV equipment targeting vulnerable farmers</i></p> <p>Status: on-going</p>	<p><i>Indirect Management with FAO</i></p>	<p><i>EUR 1,5 Million tentative</i></p>	<p><i>The objective is to equip farmers cooperatives and livestock farms with solar PVs and develop a road map for solar electrification of Gazan agri-food sector. The action is expected to result in the energy of the supply-demand gap of the agricultural sector decreasing it from 74 to 59 %,</i></p>
<p><i>PV RE system for STLV WWTP in Gaza (phase II and III - energy components under AAP2015 AAP2016)</i></p> <p>Status: on-going</p>	<p><i>Indirect Management with UNICEF</i></p>	<p><i>EUR 1,75 Million</i></p>	<p><i>This contract caters for the expansion of the RE STLV power supply (PV field, PV roof, power supply upgrade, transformers, etc.)</i></p>

<p><i>RE for GAZA BULK WATER 2018; RE for GAZA BULK WATER 2020 (GCDP)</i></p> <p>Status: decided, to be procured</p>	<p><i>Indirect Management with EIB Trust Fund</i></p>	<p><i>EUR 26,5 Million</i></p>	<p><i>EU grant contribute for about the 30% of the financing to the GCDP, the component energy for water amounts to 87,5 Million EUR,</i></p>
<p><i>RE for Water Infrastructure in GAZA (WASH component of the AAP 2018)</i></p> <p>Status: decided, to be procured</p>	<p><i>Indirect management with the PA</i></p>	<p><i>EUR 2,9 Million</i></p>	<p><i>The action will equip water infrastructure (WWT plants and Water wells) with RE components (PV panels). RE will ensure increased autonomy from the grid, decreased use of fuel and generators, and decrease of running costs. An upgrade of the infrastructure will be associated to RE equipment to enhance performance. The number of potential beneficiaries is considered around 200,000.</i></p>
<p><i>Institutional Reform of the Electricity sector in Gaza Strip</i></p> <p>Status: on-going</p>	<p><i>Indirect Management with UNOPS</i></p>	<p><i>EUR 0,93 M</i></p>	<p><i>The action will contribute to enhance institutional reform of the electricity sector in Gaza through improving the financial and operational capacities of Gaza Electricity Distribution Company.</i></p>

Annex VIII – Detail on Twinning support Sustainability by beneficiary

Twining support sustainability within PENRA

In addition to the material above, the beneficiaries shall develop purposely designed sustainability plans for each component addressed by the Twinning. These sustainability plans shall be backed up by at least basic impact assessments (regulatory, budgetary), and will be consulted and agreed with both internally and where necessary with external stakeholders (inter-ministerial and through public consultations), as required by the Beneficiary country legislation.

Relevant recommendations stemming from any strategic environmental assessments of the energy sector undertaken during the time of the Twinning (separate process to the Twinning), will be taken into account.

Sufficient time will be allocated during the inception phase of the Twinning to also deal with preparatory work on sustainability. Since results should be sustained by the Beneficiary, PENRA will describe its budget planning (Medium-Term Business Planning (MTBP) or alike), providing evidence of the necessary resources allocated to secure the sustainability of the measures implemented via the Twinning.

Twining support sustainability within PERC

The Twinning project will directly assist the process of improving the energy market; the support required under the Twinning is important to meet the PERC's goals and tasks. PERC is determined to make the Twinning a success and preserve the knowledge gained in the process.

There are several ways through which PERC will assure the sustainability of the results. One of the most important is that the trainings outlined in the logframe will be attended by at least 2-3 properly selected candidates that will be working later, as part of their job duties, in the areas covered by the trainings. This way, the continuity of the knowledge gained and expertise will be preserved in case of employee turnover.

Another way to assure the sustainability of the results, also outlined in the logframe, is the preparation of various guidelines and reports to serve as reference materials after the Twinning activities are concluded.

. The PERC Twinning team will ensure that results defined in the project's components and sub-components will be implemented as quickly as possible during the term of the Project with the full cooperation of other stakeholders.

When it comes to stakeholders, PERC confirms that the knowledge and experience gained through this Twinning will be used to recommend policies and regulations to PERC, in order to enrich dialogue on required amendments to the existing laws, regulatory processes, monitoring of the electricity sector, and tools for customers' outreach. In essence, the newly learned skills, models, proposals, approaches and methodologies are expected to manifest in enhancement of PERC's capacities at all levels.

Finally, the PERC is a member of MEDREG, and as such actively participates in a variety of events, including trainings and study visits, during which the knowledge acquired during the Twinning project will be further enhanced.

Annex IX – Detail on conditionality and sequencing Twinning

PENRA has already established a communication strategy, with an active webpage and presence in social media. Nevertheless, information is only available in Arabic and there is no standardised and regular reporting on the energy sector in English, including reporting on topics relevant to private investors. In this context the development of competences within **PENRA** on report and proposal writing, including financial reporting, and a strategy for raising awareness on the role of **PENRA** as foreseen by this Twinning, compliments well existing efforts. Regarding its internal organisation, **PENRA** has also taken several actions to streamline its internal organisation requirements. Most recent efforts are to be concluded within 2020. The Twinning will add to these efforts by providing capacity building on inventory monitoring, internal reporting and IT systems.

Further, **PENRA** is well aware of the limitations of distribution companies, including addressing network losses and other inefficiencies. There is a further apparent need to increase RES penetration in the context of security of supply and reduction in the cost of energy. Actions towards the promotion of RES, including net metering and a standardised licensing procedure are already established. **PENRA** is also working with IFIs on the development of a tendering procedure for larger RES plants. However, further support is necessary in several directions regarding the development of capacity for the oversight of electricity distribution companies, electricity transmission and RES, sector financial management, long term planning, modern technologies and methodologies towards increasing RES penetration.

Energy efficiency is essential to Palestine. **PENRA** personnel is already certified for performing energy audits, they have been managing an energy efficiency fund and are already developing energy labelling legislation for air conditioning. The Twinning will seek to accelerate existing processes and procedures by providing practical support towards concluding energy efficiency legislation and a framework for funding mechanisms and ESCOs.

In parallel to efforts towards increasing RES penetration, the Palestinian Authority has been pursuing a gas supply agreement with Israel. Such an agreement will make natural gas available to Palestine, as a fuel for electricity generation and other uses. Relevant gas transmission infrastructure will need to be developed. At this stage, **PENRA** has no knowledge of the necessary framework related at least to natural gas for power generation. The Twinning project will seek to also fill in existing gaps in this direction by providing capacity building in technical requirements, standards and legal framework of the hydrocarbon sector.

Similarly, **PERC** staff is currently involved in tasks closely related to the Components identified in the logframe. They are reviewing net metering regulations and preparing a guide for net metering of medium capacity RE projects. In the same area, the work continues on developing KPIs for RE. On the subject of communication, the **PERC** has recently entered into a work agreement with a journalist who will develop the communication plan, cover **PERC**'s news as well as events taking place in the energy sector. Newly initiated cooperation with engineering association will result in modification of technical conditions for RE and assistance in implementation of technical codes. In the area of complaints handling the staff is working on the preparation of a guide on complaint handling.