



The World Bank

Advancing Sustainability in Performance, Infrastructure, and Reliability of the Energy Sector in the West Bank and Gaza (P174708)

Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 20-Sep-2021 | Report No: PIDC31262

BASIC INFORMATION

A. Basic Project Data

Country West Bank and Gaza	Project ID P174708	Parent Project ID (if any)	Project Name Advancing Sustainability in Performance, Infrastructure, and Reliability of the Energy Sector in the West Bank and Gaza
Region MIDDLE EAST AND NORTH AFRICA	Estimated Appraisal Date Oct 19, 2021	Estimated Board Date Nov 30, 2021	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Finance	Implementing Agency Palestinian Energy and Natural Resources Authority (PENRA)	

Proposed Development Objective(s)

To improve operational and financial performance of electricity sector institutions and diversification of energy sources in the West Bank and Gaza.

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	20.00
Total Financing	20.00
of which IBRD/IDA	0.00
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	20.00
Partnership for Infrastructure Development MDTF	5.00



Special Financing

15.00

Environmental and Social Risk Classification

Substantial

Concept Review Decision

Track II-The review did authorize the preparation to continue

Other Decision (as needed)

Not Applicable

B. Introduction and Context

Country Context

1. As COVID-19 related lockdowns were eased during the majority of the first quarter (Q1) of 2021, economic activity in the Palestinian territories picked up during this period. Given the decline in the daily number of new COVID-19 cases, especially in January 2021, the Palestinian Authority (PA) took a decision to significantly ease lockdowns until early March when some measures were reintroduced as cases spiked again. The sectors that are the largest contributors to growth were services, wholesale and retail trade, and construction, in that order. However, the unemployment rate has remained stubbornly high.

2. Poverty has been adversely affected by slow growth over the past few years and the pandemic during 2020. Based on the latest available official data, 22 percent of Palestinians lived below the US\$5.5 2011 PPP a day poverty line in 2016/17. In the West Bank, poverty rates are lower but sensitive to shocks in household expenditures, while in Gaza any change in social assistance flows can significantly affect the population’s wellbeing. Projections based on GDP per capita growth suggest that the poverty rate has been constantly increasing since 2016, reaching 28.9 percent in 2020, a significant increase of 7 percentage points in the past four years. This represents approximately 1.4 million people living in poverty in 2020.

3. The near-term economic outlook for the Palestinian territories remains of concern. If the pace of the reconstruction process in Gaza remains as slow as it has been over the past several months, the Strip’s economy is expected to shrink by -0.3 percent due to the lingering effect of the conflict. The West Bank’s performance, however, is expected to be more positive. In total, this indicates a growth rate of 2.9 percent for the Palestinian economy. This implies a near stagnation in real per capita income and worsening social conditions, especially in Gaza. However, if some of the confidence-building measures materialize, including easing the movement of goods and people in and out of Gaza, this will have a significant positive impact on the economy and living standards.

Sectoral and Institutional Context

4. PENRA’s strategic long-term vision is to achieve greater autonomy through advanced transmission and distribution

infrastructure, domestic generation through independent power producers, and financial and operational sustainability of its institutions. This vision is being implemented through a sustained reform process that is led by PENRA and supported by the donor community, to transform the energy sector into a structured, regulated, and efficient service. The electricity sector can contribute toward enhancing the performance of the economy, reducing fiscal deficits, and ensuring improved competitiveness and fiscal sustainability of the Palestinian economy through improved service delivery and enhanced engagement of the private sector.

5. The electricity sector reform process, continues, with improvement and consolidation to the sector into a more efficient sector model. The Palestinian Energy and Natural Resources Authority (PENRA) was established in 1995, and consolidation of sector into distribution companies (DISCOs) began as early as 1997, the Palestine Electricity Regulatory Commission (PERC) was created in 2009. The Palestine Electricity Transmission Limited (PETL) was created in 2013, as a 'single buyer and transmission system operator (TSO)'. There is continued need for support to strengthen the sector institutions towards sustainable services. The Palestinian and Israeli electricity sectors remain deeply intertwined with Israeli imports accounting for approximately 95 percent of electricity supply in West Bank and more than half in Gaza.

6. Energy sector in the West Bank has proven quite resilient during the COVID-19 pandemic and continued progress towards consolidation, emphasizing the importance of continued investment in infrastructure and efforts to strengthen creditworthiness of the sector. During 2020, with the COVID-19 pandemic, the sector has witnessed expected impacts with demand shift from commercial to residential sector and an overall reduction in demand by nearly ten percent. Revenue collection was also affected with disruption in nearly twenty percent of bills. Recharging of pre-paid meters had to be waived due to strict lockdowns, with deferred payment options, also to worst affected post-paid customers. With job losses, some of these customer debts may never be paid back, but the full impact will only become evident gradually. Overall, the deductions from clearance revenue (net-lending) did not see a major increase and could be partially attributed to improvement in payment discipline across the sector. As of November 2020, with signing of the interim power purchase arrangements, all the high-voltage substations in the West Bank have been energized and PETL's coverage of the market in the West Bank has increased to more than thirty percent. This has created a new interest in expanding solar PV generation. These developments further emphasize the need for strengthening the distribution networks to ensure enhanced electricity supply, including from local solar energy sources.

7. Increasing electricity supply and maintaining operational sustainability in Gaza remains a challenge, which was further exacerbated by the conflict in May 2021. In Gaza, the available power supply is limited to 6 to 12 hours a day, depending on availability of fuel supply for the Gaza Power Plant (GPP) and imports from Israel. Generation from the GPP is limited due to fuel supply, fuel storage and financial constraints. GEDCO recovers less than 50 percent of total billed amount and is not paying for any electricity and fuel purchases, which are subsidized by PA and currently Qatar, respectively. To cope with the limited and unreliable supply, customers with financial means purchase very high-cost electricity (up to US\$1/kWh) from neighborhood diesel generators, which has created a parallel electricity market. This further erodes GEDCO's customer base and obstructs financial recovery. Reform efforts have been started and require continued support. The conflict in May 2021 resulted in targeted damages to the electricity network and though from an unfortunate event, provide a chance for the network to be built back better.

Relationship to CPF

8. At the time of approval, the MPA was aligned with the FY18–21 WBG Assistance Strategy (AS) and Phase 2 remains fully aligned with the recently approved FY22-25 WBG AS. The MPA supported the previous AS' outcome by improving operational and financial performance of energy sector institutions and by improving infrastructure, thereby helping



generate revenues of the DISCOs and enhance creditworthiness in the sector. Phase 2 of the MPA directly contributes to four objectives of the FY22-25 AS namely, (i) strengthening Institutions' Accountability and Transparency; (ii) supporting Service Providers to Become Financially Sustainable; (iii) connecting the Palestinian Economy to Regional and Global Economy; and (iv) improving Infrastructure through World Bank investment that leverages donor resources and by attracting private investment.

9. The MPA and proposed Phase 2 are fully aligned with the WBG Climate Change Action Plan, FCV Strategy and, MENA Climate Change Action Plan, and the MENA Strategy for Smart, Green, Inclusive, and Sustainable Infrastructure. In addition, the project will also support COVID-19 response by supporting installation of Solar PV systems in hospitals. Phase 2 will continue support for implementation and evacuation of solar PV systems both through direct installation of systems and through upgrading of Medium Voltage distribution infrastructure. The project will support rehabilitation of Gaza electricity sector, to aid recovery from the May conflict, while building back better to improve system resilience and enabling greater integration of solar energy in the grid. Across WB&G, the project will facilitate smarter solutions for improved control and management of the power system.

10. The MPA contributes directly to the second and third pillars of the World Bank's Gender Strategy (FY16-23) by removing constraints for more and better jobs and removing barriers to women's ownership and control of assets. By paying attention to Palestinian women entrepreneurs working in innovative energy fields, such as the renewables sector, this project aims to remove structural constraints facing women in their access to productive jobs and assets (i.e., finance), while also indirectly impacting health outcomes through access to clean and reliable energy sources. The MPA is especially useful as it allows a longer engagement to iteratively address the more complex and multi-faceted challenges facing women-headed households and women-owned businesses.

C. Proposed Development Objective(s)

To improve operational and financial performance of electricity sector institutions and diversification of energy sources in the West Bank and Gaza.

Key Results (From PCN)

11. Program Development Outcomes (PrDO) remains unchanged. The ASPIRE Program will progressively monitor, measure, and target the following PrDO indicators throughout all program phases, while targets may be adjusted after each phase depending on lessons learned and progress made.

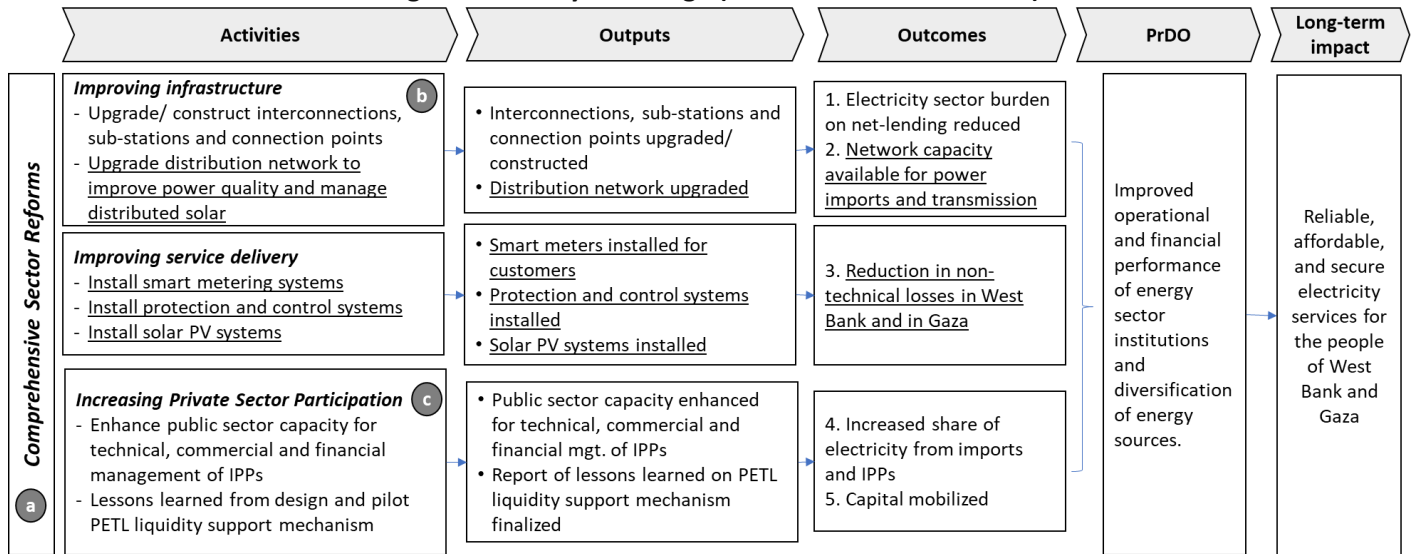
Table1. PrDO Indicators

PrDO	PrDO Indicators
Improve operational and financial performance of energy sector institutions and diversification of energy sources	<ul style="list-style-type: none"> • Non-technical losses West Bank and Gaza • Electricity sector deductions from clearance revenue mechanism 'net-lending' in West Bank • Electricity supply from imports • New supply from IPPs

12. The Program Development Objective (PrDO) is being maintained in the 2nd Phase of ASPIRE Program. ASPIRE's ToC, presented in figure 2, aims to improve operational and financial performance of energy sector institutions by

investments in infrastructure and improving overall service delivery, which in turn contributes to improving the sector creditworthiness that is essential to increase private sector investments. The ToC considers the country’s fragile and unique context, highlighting some of the key critical assumptions made for achieving the PrDO. The activities included under Phase 2 are underlined in the ToC in figure 1.

Figure 1. Theory of Change (Phase 2 focus underlined)



- Critical Assumptions:*
- a. Accelerated pace of implementation of sector reforms
 - b. Construction approvals/permits received in timely manner
 - c. Continued high-level government support for engaging private sector

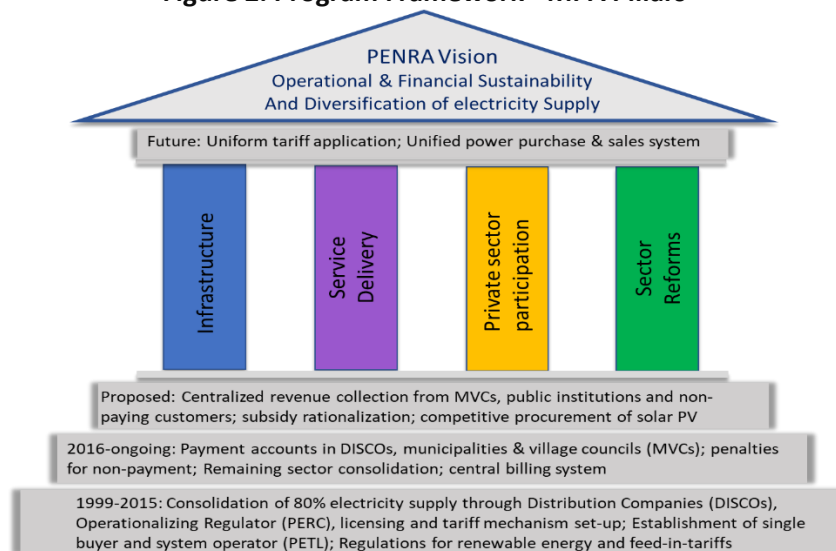
D. Concept Description

13. The Program Framework for ASPIRE transforms the road map recommended by the Securing Energy for Development report into four pillars, which serve as the basis for defining activities to be included across phases.

Activities are further classified based on the lead time required for planning and preparation. Complex activities such as engaging IPPs and constructing large infrastructure require a significant longer planning period to achieve financial and operational readiness. The ToC described in figure 2 is operationalized through the four pillars described in figure 3. The pillars are implemented across the proposed four phases. The components will be designed as described in Pillars 1–3 and will be phased in response to strategic priorities, absorptive capacity, and implementation progress. The ASPIRE MPA will also identify sector reform recommendations under Pillar 4 through technical assistance and enable policy dialogue, which could potentially be supported through future development policy grants. The learning agenda section

describes the approach to designing subsequent phases.

Figure 2. Program Framework - MPA Pillars



14. Details are provided in the PAD of ASPIRE MPA. Pillar 1 focuses on the transmission, distribution, and interconnection infrastructure necessary to import electricity from neighboring countries and improve quality and reliability of power supply across WB&G. Pillar 2 focuses on the management of distribution systems for reliability and quality and on demand-side activities to improve revenues and increase efficiency. Pillar 3 seeks to create an enabling environment for the private sector to contribute to the goal of cost-effective, diversification of electricity supply in WB&G through adoption of solar PV technology for own use and as IPPs. Pillar 4 builds on the continuing implementation of reform measures by PENRA and the PA to improve the electricity sector’s performance.

15. This section outlines Phase 2 of the MPA. The components contribute to each of the four MPA pillars. PENRA will be responsible for implementing the entire program, including Phase 2 and will coordinate with the respective sector institution, as appropriate and as noted below.

Component 1: Improving Electricity Infrastructure in the West Bank and Gaza

Subcomponent 1.1: Building Back Better the conflict affected MV Network in Gaza

16. This sub-component focuses on priority activities identified in the Gaza Rapid Damages and Needs Assessment (RDNA) and subsequent detailed studies prepared following the May 2021 conflict. The activities under this subcomponent will be led by PENRA, in coordination with Gaza Electricity Distribution Company (GEDCO). The bombardment during May 2021 caused damages to the electricity infrastructure including the MV and LV networks. Breakdowns of several feeders emanating from Israeli side resulted in supply deficit in Gaza. All activities are planned using the principles of build back better to ensure not only reconstruction, but enhanced operational performance and resilience. The objectives of this sub-component is to improve Gaza’s electricity supply network damaged during the recent conflict and rehabilitating, improving, re-constructing, and expanding the MV electricity network through a smarter design, facilitating the load management and distribution control, reducing faults on the old /dilapidated networks using SCADA and Auto recloser facilities, reducing the technical losses and thus improving network’s delivery capacity, improving the electrical services to consumers by minimizing interruptions to the network, increasing the

network reliability and efficiency and improving the energy security in Gaza strip. The scope of this sub-component comprises of (i) reconstruction of severely damaged MV feeders with SCADA control; (ii) rehabilitation of partially damaged MV network.

Subcomponent 1.2. Enhancing the distribution network in the West Bank & Gaza (USD 4.0 M)

24. The objective of this sub-component is to build adequate electricity network and facilities to help evacuate and distribute up to 300MW of additional local capacity that is being developed from solar photo voltaic (PV) power plants in WB&G to be completed by 2030. The concept of this sub-component is supported by the EIB funded distribution master plan which was recently completed and cover all the DISCOs in the West Bank. This sub-component will be led by PENRA, in coordination with PETL, and relevant DISCOs and will focus on strengthening infrastructure for MV interconnection and evacuation of solar PV systems. The sub-component will include, a) replacement of power lines (overhead and underground cables) to higher capacities to accept the generated power, improve quality and quantity of service. b) upgrading and strengthening interconnection between local grids of municipalities and councils and load management so that load profiles are better matched with the produced capacity while satisfying load growth.

Component 2: Improving Sustainability of Service Delivery of DISCOs

25. This component continues scaling-up of the Revenue Protection Program (RPP) for improved metering and billing in WB&G. The objective is to enhance financial performance and to sustain improvement of operational performance of the DISCOs and to improve billing and collection of consumers. This component will be led by PENRA in coordination with DISCOs in WB&G. This activity is in continuation of the ASPIRE phase 1 under which almost 33,000 smart meters (covering 20-30 percent of consumption) are to be deployed for the five DISCOs in West Bank. The RPP was launched in WB&G under the ongoing project (ESPIP), which covered 23 percent of the total consumption across the five DISCOs by targeting the top 16,000 customers. As the Palestinian economy does not have many large industrial or institutional consumers, a vast proportion of the consumption is by small-scale industrial and commercial (MSMEs) sector and the residential sector. ASPIRE Phase 2 is expected to target the next 20-30 percent of consumption. In total, approximately 23,000 smart meters will be installed in the five DISCOs in the West Bank, which will ensure improved billing and metering covering a significant percentage of sales. In case of GEDCO, around 15,000 customers will be provided with smart meters.

Component 3: Enabling Private and Public Sector Engagement in Renewable Energy

26. This component will support the installation of solar solutions and energy efficiency measures (e.g., heating, cooling, and lighting) in public sector with focus on health facilities. The overall objective is to increase the adoption of renewable energy alternatives and reducing energy bills (and net-lending contribution) from public sector, thus contributing to green economy, and sustainable development in the West Bank & Gaza. As the health sector is a major consumer of energy in Palestinian Authority. The reduction in energy consumption will reduce the monthly electricity bills of the Ministry of Health. Healthcare facilities are considered major energy consumers due to their need for reliable electricity and thermal energy supplies for heating, ventilation, lighting, air conditioning and the use of medical and non-medical equipment. The COVID-19 pandemic has further highlighted the critical need for stable energy services in health facilities as electricity is needed to store vaccines and perform life-saving operations. Under ASPIRE phase 1, feasibility studies were prepared for 10 major government hospitals, five will be covered under Phase 1 and five will be covered under Phase 2. The ongoing feasibility studies will assess the demand load profile of the public building and health sector facilities, the available space on the rooftop or other space and an energy audit of the efficiency of the used

equipment including lighting, health, sanitary machineries consuming either electricity or heat.

Component 4: Technical Assistance (TA) for electricity sector institutions, and operational expenses for PMU

27. The energy sector in Palestine is at a critical stage due to several factors; shifting the coordination of the electricity sector to PENRA/PETL, the ongoing efforts to build and operate interregional connections; building and energizing new substations, building a national electricity backbone, enabling more RE projects, enabling new conventional energy projects; strengthening the financial performance of the sector and others. The TA and the consultancy support will help PENRA and sector stockholders to continue to develop robust projects pipeline together with investment plans.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No
Summary of Screening of Environmental and Social Risks and Impacts	

The main risks identified and relevant to the project activities are : (i) Construction risks, e.g., dust, noise, interruption of utilities, safety of workers, (ii) occupational health and safety of operation of substations and EM risks to close-by communities, solid waste management, and PCB / other chemical handling and disposal, handling, recycling, and disposal of acid battery waste.

The project will not involve large scale private land acquisition or resettlement. However, there may be some small scale land taking needs for certain interventions. A determination of land needs will be done during preparation. There is also a potential risk of temporary negative livelihood impacts during construction (e.g. due to restricted access) on businesses/enterprises, particularly in densely populated areas in Gaza, and on farmers in agricultural areas.

No large scale labor influx or construction of large labor camps is anticipated. The project will be divided into small packages to be implemented by local contractors, primarily employing local labor, and joint ventures. The project includes a range of construction activities (small, medium, and large scale) that will be spread across locations in both West Bank and Gaza and, at concept stage, it is anticipated that there will be a low/moderate level of labor influx and labor management risks that will need to be mitigated. Further assessment will be made during preparation. Finally, some construction activity will also take place in rural/remote areas where there is a comparatively raised risk of gender based violence (GBV), sexual exploitation and abuse (SEA) and/or sexual harassment (SH) and poor support systems for survivors. Hence, on this basis at the concept stage the risk of GBV/SEA due to civil works is assessed as moderate. The GBV risk assessment tool will be run again during preparation, as further details of the design become available, to make a final assessment by appraisal.

The project also entails community health and safety risks, particularly associated with Covid-19. Given the rise of Covid-

19 cases in both West Bank and Gaza, particularly the newer and more infectious variants, there is a potential risk of exposure of workers and communities to the disease.

Additional risks include potential exclusion from project benefits and/or lack of meaningful engagement with women and marginalized groups (e.g. people living in access restricted areas (ARAs), women headed households, the poor etc.). The exclusion risk is higher in Gaza as some households and small businesses may not be able to access the Gaza solar revolving fund due to restrictions on banking transactions with financial institutions not recognized by the Palestinian Monetary Authority. The project also entails some contextual risks as some of the proposed infrastructure will be in Area C in West Bank which is a complex context to work in due to security related challenges.

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APPROVAL

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