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PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

FROM THE TRUST FUND FOR GAZA AND WEST BANK

IN THE AMOUNT OF US\$ 8 MILLION EQUIVALENT

TO THE

PALESTINE LIBERATION ORGANIZATION (FOR THE BENEFIT OF THE PALESTINIAN AUTHORITY)

FOR

GAZA ELECTRICITY NETWORK REHABILITATION PROJECT

February 7, 2012

Sustainable Development Department Middle East and North Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective January 23, 2012)

Currency Unit = New Israeli Shekel (NIS) NIS3.775 US\$1

FISCAL YEAR

December 31 January 1 _ ABBREVIATIONS AND ACRONYMS

Designated Account DA

Electric Utility Management Project **EUMP**

Environmental and Social Management plan **ESMAP** Environmental and Social Impact Assessment **ESIA**

EC **European Commission** Financial Management FM **Financial Statement** FS **GPP** Gaza Power Plant GOI Government of Israel

Gaza Electricity Distribution Company **GEDCO**

Geographic Information System **GIS** Hebron Electric Power Company HEPCO

IsDB Islamic Development Bank

Interim Strategy for West Bank and Gaza **ISWBG**

Israel Electricity Company IEC **Interim Financial Reports IFR**

International Bank for Research and Development **IBRD**

International Development Association IDA

Information Technology IT

JDECO Jerusalem District Electricity Company

Ministry of Finance MoF

Northern Electric Distribution Company NEDCO **ORAF** Operational Risk Assessment Framework

PA Palestinian Authority

Project Appraisal Document PAD Project Development Objective PDO

Palestine Energy and Natural Resources Authority **PEA** Palestinian Electricity Regulatory Commission **PERC**

Project Monitoring Unit PMU

Southern Electric Power Company **SELCO**

Terms of Reference **TOR** WB&G West Bank and Gaza

> Regional Vice President: Inger Andersen Country Director: Mariam Sherman Sector Director: Junaid Kamal Ahmed Sector Manager: Patricia Veevers-Carter

> > Task Team Leader: **Husam Beides**

WEST BANK AND GAZA GAZA ELECTRICITY NETWORK REHABILITATION PROJECT

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PAD DATA SHEET

West Bank and Gaza

GZ-Gaza Electricity Network Rehab (P116199)

PROJECT APPRAISAL DOCUMENT

MIDDLE EAST AND NORTH AFRICA MNSSD

				Bas	sic Informa	tion			
Date:		07-Feb-2012			Sectors:	General energy sector (1	100%)		
Country Director:		Mariam J. Sher	man		Themes:	Infrastructure services f	or private sector d	evelopment (10	00%)
Sector Manager/D	irector:	Patricia Veever Ahmad	s-Carter/Junaid	l Kamal					
Project ID:		P116199			EA Category:	B - Partial Assessment			
Lending Instrumen	nt:	Specific Investi	ment Loan						
Team Leader(s):		Husam Moham	ed Beides						
Does the project in	nclude any C	DD component?	No						
Joint IFC: No									
Borrower: Palestir	ne Liberation	Organization fo	r the Benefit of	the Pales	stinian Authority				
Responsible Agen	cy: Palestinia	an Energy and N	atural Resource	es Author	ity				
Contact:	Eng. Ja	ımal Abu Ghous	h		Title:	Project Monito	oring Unit Directo	r	
Telephone No.:	970-22	98-6190			Email:	jya@menr.org			
Project Implement	tation Period:	Start	Date: 01-Jun-2	2012	Er	ad Date: 31-Dec-2015			
Expected Effective	eness Date:	01-Jun-2	012		·	•			
Expected Closing	Date:	31-Dec-2	2015						
			Pro	ject F	inancing Da	nta(US\$M)			
[] Loan	[X] G1	rant	[] Other						
[] Credit	[] Gu	uarantee							
For Loans/Cr	edits/Oth	ers							
Total Project Cost	(US\$M):	16	.00						
Total Bank Financ	eing (US\$M):	: 8.0	00						
Financing Sou	ırce							Amo	unt(US\$M)
Borrower									0.00
Islamic Developm	ent Bank								8.00
Special Financing									8.00
Total									16.00
Expected Disk	oursement	ts (in USD M	Iillion)	•					
_	013	2014	2015	2016					
Annual 2.5		2.00	2.00	1.50					
	-	*		1					

Cumulative	0.50	4.5	6.50	8.00					
Project De	velopment (Objective(s)							
The project de	velopment obje	ective is to rehal	bilitate and exp	and the electricity	y networks in Gaza in	order to improve	their reliabilit	y and perfo	ormance.
Componen	te								
								Total C	ost (USD Millions)
Component Name Network Rehabilitation and Expansion) (Bank financing 4.5)
		l Technical Assi	istance to PEA						(Bank financing 3.5)
	,			Co	mnlianaa				,
Policy				Col	mpliance				
Does the proje	ct depart from	the CAS in con	tent or in other	significant respec	ets?			Yes []	No [X]
Does the proje	ct require any o	exceptions from	Bank policies)				Yes []	No [X]
		Bank managen		•				Yes []	No [X]
		ception sought f		?				Yes []	No [X]
				implementation?	,			Yes [X]	No []
Safeguard	Policies Tri	iggered by t	he Project				Yes	,	No
	Assessment C						X		
Natural Habita	ts OP/BP 4.04								X
Forests OP/BF	4.36								X
Pest Managem	ent OP 4.09								X
Physical Cultu	ral Resources (OP/BP 4.11							X
Indigenous Pe	oples OP/BP 4.	.10							X
Involuntary Re	esettlement OP	/BP 4.12							X
Safety of Dam	s OP/BP 4.37								X
Projects on Int	ernational Wat	erways OP/BP	7.50						X
Projects in Dis	puted Areas O	P/BP 7.60							X
Legal Covena	nts								
Name				Recurrent		Due Date		Freque	ncy
Subsidiary Ag	reement					By Effectivene	ss		
Description o	f Covenant			•				•	
A Subsidiary	Agreement is si	gned between the	he PLO and PA	<u> </u>					
Name Recurrent Due Date							Frequency		
PEA Arrangements with GEDCO for Goods and Services By Effectiveness									
Description o									
		ngements satisfa ble to GEDCO	actory to the Ba	ink, to ensure that	t goods and services fi	nanced out of the	proceeds of th	e Grant fo	r the benefit of
Name	me Recurrent Due Date Frequency					ncy			
Project Operat	ional Manual					By Effectivene	ss		
Description o	f Covenant			. —					
PEA shall sub	mit to the Bank	a Project Oper	ational Manual	for the project		1		,	
Name				Recurrent		Due Date		Freque	псу

Lina Fathallah Rajoub Majd Laisoon Non Bank Staff Name	Consultant		Financial Manage	ement	MNA	FM
Majd Laisoon			Financial Manage	ement	MNA	FM
-			Financial Manage	ement	MNA	FM
Lina Fathallah Rajoub	Trocurement specia	Financial Management		MNAFM		
Lina Fathallah Rajoub Procurement Specialist		ist Procurement			MNAPR	
Husam Mohamed Beides	Senior Energy Speci	ialist	Team Lead		MNSI	EG
Hayat Taleb Al-Harazi	Operations Analyst		Financial Analysis		MNA	RS
Hana Salah	Consultant		Social Safeguards		MNSSO	
Nikolai Soubbotin	Senior Counsel		Legal Aspects		LEGEM	
Banu Setlur	Environmental Spec	ialist	Environmental Aspects		MNSEN	
Reinaldo Goncalves Mendonca	Consultant		Consultant/Power Engineer		AFTEG	
Azeb Yideru	Program Assistant		Administrative		MNSSD	
Name	Title		Specialization		Unit	
Bank Staff						
		Team (Composition			
PEA, through consultants, will developed GEDCO institution building.	op technical designs/speci	fications includi	ing bid documents fo	r IT Systems. Consulta	ints will a	lso support implementation of
Building Description of Covenant						
Technical Design Development & GF	EDCO Institution			31-Dec-2012		
Name		Recurrent		Due Date		Frequency
Description of Covenant The PA will ensure that the PEA main satisfactory to the Bank	ntains at all times during	project impleme	ntation the PMU wit	h resources and staff no	ecessary f	or project implementation and
PA Staff and Resource Provision for I	Project Implementation			During Project Implementation		
Name		Recurrent		Due Date		Frequency
The PA shall submit audited project f independent auditors acceptable to the		hall cause GEDO	CO to carry out each	year financial audits of	their fina	ancial statements by
Description of Covenant	ļ		ļ		-	
Audit Report	Recuirent	X	Due Duic		Yearly	
action plan to improve billing collecti Name		Recurrent		Due Date		Frequency
PEA to provide GEDCO with 10,000	prepaid meters for a mete	ering pilot in Ga	za based on a technic	cal and social assessme	nt includi	ng public consultation and ar
PEA to Provide Prepaid Meters to GE Description of Covenant	EDCO			31-Dec-2012		
	TD CO			21 D 2012		

Location

Gaza

Planned

 \mathbf{X}

Actual

Comments

First Administrative Division

Gaza Strip

Locations Country

West Bank and Gaza

I. STRATEGIC CONTEXT

A. Country Context

- 1. The economic situation in the West Bank and Gaza (WB&G) is fragile and largely sustained by high capital inflows from donors, bilateral assistance programs and the United Nations. In 2009, the Palestinian Authority (PA) received more than US\$1.34 billion in budget support from donors alone. Real economic growth in WB&G is estimated to have reached 9.3 percent in 2010, exceeding the PA's projection of 8 percent. Growth does not, however, appear sustainable. It reflects recovery from the very low base reached during the second intifada and is still mainly confined to the non-tradable sector and primarily donor-driven.
- 2. Restrictions currently in place limit private sector contribution to GDP growth. However, investor confidence has increased with less stringent security restrictions by the Government of Israel (GOI) and reforms implemented by the PA that have improved security and service delivery.
- 3. The population in the West Bank and Gaza was about 4 million in 2010 with growth averaging 2.7 percent per annum.² Income per capita in 2008 averaged US\$1,340 (about US\$1,718 in West Bank and US\$775 in Gaza based on PCBS³ data). Unemployment declined slightly, but remained high in 2010 at 23 percent primarily due to the situation in Gaza which reported an unemployment rate of almost 37 percent that same year.
- 4. The Gaza economy appears to have rebounded sharply in 2010 with the Israeli border crossings allowing in more goods. Estimates suggest that real growth was nearly 15 percent of GDP in 2010, albeit from a very low base. This does not signal that the Gaza economy is fully recovering given that the private sector remains in a state of near total collapse. But it does reflect the development of coping mechanisms that have allowed some economic activity to resume on a very limited scale.
- 5. Over the last few years, Gaza has been split from the West Bank and isolated by Israeli border closures. However, there have been recent political reconciliation efforts among the Palestinians and associated attempts to establish a unity government of technocrats with one of its objectives being the reconstruction of Gaza. This could, if successful, make the implementation of the PA's Gaza Recovery and Reconstruction plan a priority. Furthermore, the opening of the Rafah Crossing by Egypt might also ease the restriction of entry of materials necessary for infrastructure development in Gaza.⁴
- 6. The economic crisis prevailing in Gaza over the last several years has deepened with the destruction of homes and infrastructure after the December 2008 conflict with Israel. Donor pledges of US\$4.7 billion made at Sharm Al-Sheikh in March 2009 to fund the recovery and reconstruction of Gaza remain largely undisbursed. The PA anticipates that the funds for the

world Bank Data

¹ US\$1.8 billion in 2008 and almost US\$1 billion in 2007

² World Bank Data

³ Palestinian Central Bureau of Statistics

⁴ Rafah Crossing remains limited to passengers. Construction materials are being let into Gaza through Israel only. Prospect of allowing transfer of construction materials from Rafah Crossing is not certain yet.

majority of the recovery and reconstruction requirements, shown in Exhibit 1 below, will be disbursed during calendar years 2011-2013.

Exhibit 1: Gaza Recovery and Restructuring Fund Requirements⁵

Sector	US\$ million	%
Infrastructure	531	40%
Economy	412	31%
Social	315	24%
Governance	68	5%
Total	1,326	100%

7. A large part of the recovery requirements in Gaza is for the rehabilitation of the infrastructure networks (including electricity) which has been severely compromised by years of neglect and destruction. The economy and businesses in Gaza are trying to survive on minimal services until circumstances permit them to operate fully again. A recent survey by the Palestinian Federation of Industries found that only 54 percent of industrial establishments destroyed in the December 2008 conflict were fully or partially rebuilt and only 23 percent of the work force was re-hired. The longer the closure and the failing infrastructure continue, the more difficult it will be for businesses to resume normal operations.

B. Sectoral and Institutional Context

Sector Reform and Institutions⁶

8. The PA has implemented much of its medium-term power development strategy as set out in the 1997 policy statement through the Palestine Energy and Natural Resources Authority (PEA)⁷ and embarked on policies to reduce net lending on electricity.⁸ It created three additional electricity distribution companies: the Northern Electric Distribution Company (NEDCO) that was established in the northern region of the West Bank in January 2008, and began operation of the electricity services in Nablus and Jenin in 2010; the Hebron Electric Power Company (HEPCO); and Southern Electric Power Company (SELCO) that were created around 2003-2004

⁵ Palestinian National Development Plan 2011-2013, April 2011

⁶ Development of the electricity sector described in this section is in large consistent with assessment and recommendations provided in the 2007 Energy Sector Review prepared by the World Bank.

⁷ "Palestine National Authority, the Palestine Energy Authority, the Power Sector, Letter of Sector Policy", August 7, 1997.

The PA's priority has been to refocus its fiscal resources on its most important needs and gradually reduce its dependence on foreign aid. The major challenge is to arrest the large and rising arrears in amounts owed by some electricity utilities, municipal councils and village councils for bulk power purchases from the Israel Electric Corporation Ltd. These arrears are covered by the PA through deductions made by the Israeli government from the PA's clearance revenues. The resulting "net lending" to the electricity utilities, MCs and VCs is undermining the PA's fiscal position. Net lending began accelerating rapidly in 2006 and by 2007 was accumulating at a rate of approximately US\$50 million per month; the PA and IMF estimate that it reached about US\$535 million or nearly 11 percent of GDP for 2007. However, due to electricity sector development actions, described in this section, and to enforcement measures adopted by PA such as requiring citizens to present a 'certificate of payment' of utility bills in order to receive any municipal services and deducting overdue bills from PA employees pay, and financial incentives for municipalities to pay the IEC, net lending has been reduced to US\$ 230 million and US\$ 163 million in 2009 and 2010.

in the southern region of the West Bank. These three utilities joined the long-established utility serving the central area around Jerusalem - the Jerusalem District Electricity Company (JDECO) - to service the entire West Bank and part of Jerusalem, while the Gaza Electricity Distribution Company (GEDCO), which was established in 1998 by a ministerial decree, is responsible for electricity distribution in Gaza.

9. In addition, the Electricity Law was also approved and enacted in May 2009 and in February 2010 the President approved the establishment of the Palestinian Electricity Regulatory Commission (PERC).

Electricity Demand and Supply in West Bank and Gaza

- 10. Despite the troubles of the early 2000s, energy demand in West Bank and Gaza has continued to grow quite rapidly. According to World Bank estimates and the Palestinian Authority's Energy Sector Strategy (2011-2013), with an access rate of about 99 percent, consumption of electricity in the West Bank grew at 6.4 percent annually from 1999 to 2005 and 8 percent between 2006 and 2010, and is projected to grow steadily at a rate of about 7 percent from 2011-2013. The access rate in Gaza is about 97 percent, and consumption of electricity in Gaza grew on average at about 10 percent annually from 1999 to 2005. However, in recent years, electricity demand and growth in Gaza have been limited by the shortage of supply, damage to electricity networks and the blockade.
- 11. The Israel Electricity Company (IEC) supplies electricity to the West Bank and Gaza with over 85 percent market share, making it the largest provider of electricity. Electricity transmission to West Bank and Gaza is handled through IEC's medium voltage lines (22kV and 33kV), while distribution networks are rather fragmented and have been handled by a combination of distribution utilities and municipalities. The peak demand in West Bank was reported by PEA at 550 MW in 2008 which is highly dependent on electricity supply from the IEC providing about 98 percent of the total electricity to West Bank. The remaining marginal supply of 2 percent comes from cross-border connections with Jordan.
- 12. In Gaza, the electricity comes from three different sources: (i) imports from IEC, (ii) imports from Egypt, and (iii) the Gaza Power Plant (GPP). The existing supply capacity from IEC to Gaza is approximately 120 MW and energy is fed from Israel through ten points along the border from north to south via 22 kilovolt (kV) lines. Gaza also receives up to 17 MW from Egypt since 2006 as an emergency measure via two 22 kV feeder lines. The generating capacity of the diesel-generated Gaza Power Plant (GPP) is 140 MW; however, the maximum dispatchable capacity is restricted to 60 MW due to the plant's limited transmission capacity after the 2006 conflict. Moreover, the plant's utilization rate can decrease further due to limited diesel availability. Hence, if the available capacity from GPP ranges from 30 to 60 MW, total electricity supply in Gaza would range from 167 to 197 MW.
- 13. The PEA is undertaking the rehabilitation and expansion of electricity networks in the West Bank to improve the reliability of electricity supply. The allocation of resources to implement a network rehabilitation and expansion program is also needed in Gaza.

14. Total peak electricity demand in Gaza was estimated at 280 MW in 2010 which was much higher than the available capacity of 167 to 197 MW. To cope with the situation, 8-hour electricity outages have been scheduled daily, impacting the everyday lives of Gaza's population. Based on GEDCO's estimates, the number of people affected by prolonged daily outrages is provided in Exhibit 2.

Exhibit 2: 20109 Gaza Power Demand and Deficit and Population Impact

Total Available Power	% of Deficit Power	Number of People Affected
167 MW	40.4%	605,400
197 MW	29.6%	444,600

- 15. The shortage of electricity is further exacerbated by the deteriorated conditions of the electricity networks in Gaza. Despite some progress being made during the last two years in repairing part of the damages in the electricity distribution networks, the networks themselves are laden with many problems including:
 - Overloaded and limited capacity of the medium voltage feeders from the main supply points (IEC, GPP and Egypt border) to the main load centers.
 - Inadequate capacity of the low voltage networks to meet existing loads including unsafe installations and very low reliability and voltage profiles.
 - High network losses reaching up to 30% of electricity supply which therefore worsens the level of electricity cuts.
- 16. These conditions have aggravated the already difficult living conditions of the population in Gaza. Electricity shortages and cuts are negatively impacting all social and economic aspects of daily life ranging from hospitals, clinics, and education to water, sanitation, agriculture, commercial business and the remaining functioning industries. Private back-up generators are extensively used during periods of electricity cuts. These generators in many cases are unsafe and environmentally polluting, in addition to not being available to all sectors of the population.
- 17. Furthermore, GEDCO has been suffering from operating in a very challenging political environment affecting the company's capacity and operation. With Gaza being isolated, the company's ability to function normally has been severely limited. Moreover with the blockade, the company has not been able to have access to professional staff that can support capacity building within the company to improve its operation. A recent European Commission (EC) financed assessment of GEDCO against electricity utility standards, found GEDCO ineffective or in need of improvement as illustrated in Exhibit 3. However, GEDCO has experienced technical staff with adequate skills needed to design and undertake the physical implementation of network rehabilitation projects.

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⁹ Electricity demand has been growing rapidly in Gaza during 2011. Peak demand of 320 MW was recorded in November 2011.

Exhibit 3: GEDCO Performance Rating

25100000000000000000000000000000000						
Area	Overall Rating					
Management Framework	Ineffective					
Cash Management	Needs improvement					
Revenue Management	Ineffective					
Procurement Management	Ineffective					
General Accounting	Satisfactory					
Human Resources Management	Ineffective					
Fixed Assets Management	Needs Improvement					
Information Technology	Needs Improvement					
Financial Reporting	Ineffective					

- 18. Despite some of the efforts undertaken during 2010 to increase collection, electricity payment and collection rate was only about 40% and way below acceptable industry standards. The electricity network losses and leakage have also been high at more than 30%. Furthermore, at least over the last four years, GEDCO has been charging the same tariff for its electricity services. These have deepened the financial difficulties of GEDCO and negatively impacted GEDCO's cash flow and its ability to meet its operating expenses and the large investment needs in network rehabilitation and expansion. The reconciliation between West Bank and Gaza could provide an opportunity for PERC¹¹ to expand electricity tariff regulations with effective affordability considerations to Gaza as well as utility cost and financial performance regulation and oversight of GEDCO. 12
- 19. Due to the tough political environment, addressing the shortages of electricity supply and meeting growing demand in Gaza remains the main challenge for the PA and PEA. However, from the electricity sector's perspective, Gaza has a good selection of options for increasing power supply which can be developed and implemented as the evolving political environment allows. These options include:
 - Convert GPP to burn natural gas. Conversion of GPP to burn natural gas instead of gasoil would save tens of millions of dollars annually for the Palestinian economy and the PA in view of the prevailing high fuel prices and constrained level of electricity production. The savings are achievable with minor investments in converting the plant to operate on gas and constructing a gas pipeline to the plant site along with reinforcement of transmission connections to the network. Once the conversion of the plant to natural gas is confirmed, the operation of the plant at full capacity and its potential for future expansion will be feasible. However, the conversion of GPP to natural gas would only be

¹⁰ GEDCO's tariff for household consumers includes three blocks; 1-200 kwh at 0.44 NIS/kwh, 201-500 kwh at 0.46 NIS/kwh and 3) above 500 kwh at 0.48 NIS/kwh. The price differential between the three blocks is too small to target consumers of low electricity consumption or to encourage efficient use of electricity.

¹¹ Under the ongoing Electric Utility Management Project, the World Bank is financing the initial operating cost of PERC.

¹² PERC has completed a tariff methodology (cost-based methodology) for a unified tariff structure for the electricity utilities. The methodology is based on a weighted average of the cost of electricity, the utilities' regulated asset base (RAB) and an approved rate of return. The tariff structure includes three blocks of consumption for residential consumers. New electricity tariffs for the electricity utilities had been prepared for the four distribution companies in West Bank (JDECO, NEDCO, HEPCO and SELCO) and were approved by the Cabinet in June 2011.

- a viable option when a source of gas supply (from Egypt, Gaza Marine or Israel) is determined and agreed upon.
- Interconnection with Egypt. Increase the supply of electricity from Egypt to Gaza above the current level of 17MW will require the construction of a 220 kV interconnection between Gaza and Egypt. Feasibility study and tender documents were completed in 2008 for this project and financing from the Islamic Development Bank (IsDB) was secured. The project envisaged that power transfer from Egypt is expected to be 150 MW. Four to seven km of the 220 kV high voltage transmission lines, connecting substation and medium voltage feeders would be constructed inside Gaza to connect with the 50 km segment of the line in Egypt. The political situation and siege on Gaza in the past prevented the implementation of this project.
- **Increase Import from IEC:** Increasing the supply of electricity from Israel to Gaza will require the expansion of the Gaza North substation and the reconfiguration of the distribution system in the North.
- 20. Given the deteriorated conditions of the electricity networks in Gaza, the PEA is planning to increase the capacity of the networks to be ready to support the above supply options as they become viable as well as to improve the networks' performance efficiency, safety and utilization. That will therefore require major rehabilitation and expansion of the electricity networks in Gaza including investments in the medium- and low-voltage distribution systems and metering. To assist achieving this objective, this proposed Gaza Electricity Networks Project ("the Project") aims to finance part of GEDCO's electricity investment needs and improve its technical, financial and institutional capacity.

C. Higher Level Objectives to which the Project Contributes

- 21. The World Bank's assistance program to the West Bank and Gaza for 2011-2012 amounts to US\$75 million. In agreement with the Palestinian Authority, US\$20 million out of these funds will be used to finance three infrastructure projects in Gaza including electricity, water, and solid waste management. Further discussions between the World Bank and the IsDB management resulted in an "in principle" agreement to cooperate in financing these projects. The IsDB will match the Bank's contributions bringing the expected total allocation of the proposed Project to about US\$16 million.
- 22. The proposed Project provides financing support to PA's National Development Plan 2011-2013, which designates more than US\$500 million for reconstruction and rehabilitation of infrastructure (including electricity) in Gaza. The Project also addresses two of the four pillars set out in the Interim Strategy for West Bank and Gaza (ISWBG) Fiscal Year 2008-2010, which is currently in effect. These pillars are: (i) support economic and private sector development; and (ii) support public infrastructure development. Furthermore, the Project's support of a major program for GEDCO's capacity building and network investments is consistent with the proposed pillars for the new ISWBG under preparation for Fiscal Year 2012-2014 including (i) strengthening the institutions of a future state to efficiently manage public finances and ensure services to citizens; and (ii) creating an enabling environment for private sector led growth.

- 23. Some of the major benefits derived from improving electricity service provision include: (i) a higher standard of living for households (e.g. children are able to study at night, women are able to use household equipment such as washers to reduce the workload as well as have access to televisions, internet and other forms of communication); (ii) an ability for businesses to function for longer and more efficiently therefore being able to operate more profitably; (iii) a reduction of physical dangers caused by old electrical networks; and (iv) an ability of health care clinics and hospitals as well as water supply and sewage treatments system to operate more efficiently.
- 24. The Project will have a positive impact in terms of employment in Gaza through the hiring of local contractors to implement the investments financed by the Project including civil works and installation of electrical networks equipment¹³. The implementation of the investment by local contractors in Gaza will allow a local labor force to gain technical experience and skills required for sustained maintenance and expansion of the electricity networks in Gaza. In addition, there will be a longer term indirect employment created by business and industries as a result of the increased reliability of electricity networks.
- 25. The technical assistance component of the Project will also assist in improving the governance structure of GEDCO through the provision of Information Technology (IT) software and hardware for new financial, accounting and administration management systems. These systems are currently being designed for GEDCO under an ongoing technical assistance provided by the EC for improving the governance structure of the distribution companies in West Bank and Gaza¹⁴.
- 26. Furthermore, the proposed Project is designed to introduce, for the first time, social inclusion and consultation practices to GEDCO. The Environmental and Social Impact Assessment, prepared by GEDCO for the proposed Project, has been shared for consultation with key stakeholders in each of Gaza's five governorates. In addition, the Project supports the implementation of a prepaid metering pilot project to improve collection. GEDCO will however be required to prepare a technical and social impact assessment for the pilot project including awareness campaign to ensure public acceptance. GEDCO will also ensure that the pilot project will not include installation of prepaid meters to vulnerable consumers.
- 27. Finally, the proposed Project represents the start of a strategic partnership with the IsDB, which will be providing matching financing with that of the World Bank. The Project therefore benefits from a strong partnership between the World Bank and the IsDB. Such collaboration

¹³ The total cost of the Project is US\$16 million, consisting of about US\$ 12 million of supply of goods from abroad and about US\$4 million for local contracting in Gaza.

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¹⁴ The governance assessment of GEDCO under the ongoing technical assistance includes, among others: (1) Comprehensive legal review of the company and its current bilateral agreements and accordingly recommend modifications; (2) Admin and financial policies and procedures review and recommendations; (3) Stakeholders analysis: operational mapping of related agencies, companies and institutions; (4) AS-IS situation analysis: Includes benchmarking operational model and financial arrangements to other distribution companies operating in West Bank and Gaza; (5) Clientele analysis of GEDCO; (6) Operational and financial gap analysis and recommendation; and (7) Staff coaching.

will provide more effective cooperation and leverage on available resources for the reconstruction of Gaza.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

28. The project development objective is to rehabilitate and expand the electricity networks in Gaza in order to improve their reliability and performance.

Project Beneficiaries

- 29. The Project includes a significant technical assistance component for capacity building at GEDCO in order to improve its financial, accounting and administrative management as well as utility operations.
- 30. Project beneficiaries include the people of Gaza (including commercial and industrial entities) who have suffered from significant power shortages over the last few years. Secondary beneficiaries include GEDCO staff who will benefit from capacity building activities in financial, accounting, administrative and utility operations.

PDO Level Results Indicators

- 31. The project development objective will be measured using the following indicators:
 - Increase Megavolt-ampere (MVA) capacity of medium voltage feeders rehabilitated and/or constructed;
 - Increase collections;
 - Reduce network losses; and
 - Complete a Gaza electricity master plan¹⁵.

III. PROJECT DESCRIPTION

A. Project Components

- 32. *Component 1: Network Rehabilitation and Expansion.* The investment projects financed under this component include the following:
 - (a) Subcomponent 1: Rehabilitation of Medium and Low Voltage Networks. This subcomponent includes the rehabilitation of medium and low voltage networks.
 - (b) Subcomponent 2: Network Supply Improvement. This subcomponent includes the construction of new network facilities to improve the performance of the electricity

¹⁵ Given the significant shortage of electricity supply in Gaza as well as the lack of specific records on network outages impacting the consumer electricity services, the master plan will, among others, develop the baseline for distribution network performance and reliability indexes.

- supply in Gaza, i.e. new 22 kV underground feeders from the Gaza Power Plant, reconfiguration and expansion of medium and low voltage networks, and new 22 kV underground feeders from the proposed 161 kV north substation.
- (c) Subcomponent 3: Collection Improvement. This subcomponent includes the purchase of mobile billing PCs and installation of prepaid meters and supporting equipment to improve electricity tariffs collection.
- 33. Component 2: GEDCO Capacity Building and Technical Assistance to PEA. The aim of this component is to increase the capacity of GEDCO in system operation and management as well as to provide technical assistance to the PEA as follows:
 - (d) Subcomponent 1: Supply of Vehicles and IT System to GEDCO: This will include the procurement of vehicles, IT systems including hardware and software and tools, Geographic Information System (GIS) and load flow hardware and software.
 - (e) Subcomponent 2: Technical Assistance to PEA including the recruitment of a consulting firm to assist PEA in preparing a master plan for the electricity sector in Gaza, and an auditing firm for project costs.
- 34. A detailed description of the Project components and associated cost estimates and financing sources (World Bank, IsDB) is presented in Annex 2.

B. Project Financing

Lending Instrument

35. The proposed World Bank instrument used for this project is a special financing grant from the Trust Fund for Gaza and West Bank.

Project Cost and Financing

36. The Project is estimated to cost a total of US\$16 million and will be financed by a US\$8 million grant from the World Bank and a grant of US\$8 million from the IsDB. The World Bank and IsDB financing will be based on parallel financing as follows:

Project Components	Total Project Cost (US\$ Mln)	WB (US\$ Mln)	% Financing	IsDB (US\$ Mln)	% Financing
1.N. 1.D.1.122.2	11.6	4.2	260/	7.4	C 40/
Network Rehabilitation and Expansion	11.6	4.2	36%	7.4	64%
2. Capacity Building and Technical Assistance	3.4	3.4	100%	0.0	0%
Total Baseline Costs	15.0	7.6	51%	7.4	49%
Physical contingencies	0.6	0.2	33%	0.4	67%
Price contingencies	0.4	0.2	50%	0.2	50%
Approximate Total Project Costs	16.0	8.0	50%	8.0	50%
Interest During Implementation	0.0	0.0	0%	0.0	0%
Front-End Fees	0.0	0.0	0%	0.0	0%
Total Financing Required	16.0	8.0	50%	8.0	50%

C. Lessons Learned and Reflected in the Project Design

- 37. Experience from implementing previous projects in West Bank & Gaza indicates major problems in coordination, reporting, monitoring and control. One cause was the lack of a central Project Monitoring Unit (PMU) for overall management. The existing established PMU¹⁶ under the PEA will be responsible for handling all aspects of financial and procurement issues related to the Project, while GEDCO will be responsible for day to day implementation. Key members of the PMU are experienced in implementing similar projects under the Bank's procurement guidelines, policies and procedures.
- 38. The financing arrangements will be based on parallel financing as co-financing carries special risks, especially in terms of implementation and disbursement delays. Hence, no procurement packages for any of the project's components will be co-financed to minimize this risk.
- 39. The investment components proposed for financing are of proven design and a streamlined approach is used focusing on financing conventional projects for rehabilitation of electricity networks to improve their operations and expand their capacity. GEDCO is unable to collect electricity bills in full from their customers. Therefore, the Project design addresses the issue of improving collections with the installation of pre-paid meters supplied by PEA and mobile billing PCs. However, the Project will also ensure that vulnerable consumers are not included in the pilot so that they are not unduly impacted. Project design also assumes a comprehensive approach for electricity utility development by including a major technical assistance component to enhance GEDCO's capacity to sustain the operation of its network and improve its financial and accounting management.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

- 40. The proposed Project will be implemented by PEA through the existing PMU, which is currently handling the implementation of other Bank and donor financed projects including the ongoing Electric Utility Management Project (EUMP). The PMU operates under the umbrella of the PEA and is fully staffed with a director, procurement and financial management staff, an accountant and other relevant staff. Key members of the PMU are experienced in implementing similar projects under the Bank's procurement guidelines, policies and procedures. Therefore, the PMU will be responsible for handling all procurement and financial management issues related to the proposed Project.
- 41. GEDCO will be responsible, in coordination with and support from PEA, for the design and preparation of the technical specifications of the Project components. GEDCO will also be responsible for the physical implementation of the activities financed by the Project including the supervision of local contractors for the installation and civil works and consultants for the technical assistance component.

Part of the operating cost of the PMU is provided by the Governments of Norway and Sweden under the ongoing Electric Utility Management Project (EUMP).

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42. The PMU will also be responsible for coordination with GEDCO, the Bank, the IsDB and government authorities on the supply of equipment and materials to GEDCO and contract execution. Additional staffing of the PEA and GEDCO will be made available to support coordinating the execution and monitoring of the project activities in Gaza. The PEA has two staff operating in Gaza and is already coordinating with the PMU. The PMU will also be responsible for direct coordination on contract execution and monitoring with GEDCO as well as project reporting.

B. Results Monitoring and Evaluation

43. The Project will be monitored and evaluated on the basis of the parameters and targets set out in the results framework provided in Annex 1. The Bank and the IsDB will carry out regular supervision missions during which project progress, outputs and work plan updates will be reviewed. Moreover, the PMU will be required to submit comprehensive progress reports on implementation aspects semi-annually that would include reporting on procurement, financial management, physical implementation and environmental aspects among others.

C. Sustainability

44. The PMU will work closely with GEDCO, the Bank and IsDB and other government agencies as required to support the implementation of the Project but also to ensure that adequate capacity is transferred to GEDCO staff. The technical capacity of GEDCO has somewhat eroded over the years due to the situation in Gaza and as a result, this Project takes into account technical assistance and capacity development for GEDCO primarily to improve its financial, accounting and administrative management as well as utility operations. Moreover, to ensure adequate and sustainable long-term planning for Gaza's electricity sector, the Project will also recruit a consulting firm to assist PEA in the design a master plan for the development of the electricity sector in Gaza.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

45. The Project's potential risks are provided in the Operational Risk Assessment Framework (Annex 4). The Project scope and design are simple and its preparation process has gone smoothly with excellent cooperation from GEDCO and PEA. Therefore the preparation risk is not material and has been rated moderate. However, the implementation risk rating is high largely due to the complex political context in West Bank and Gaza and the restrictions imposed by the GOI on Gaza which could severely hamper project implementation. Below is a summary of risk ratings:

Risk	Rating
Stakeholder Risk	M
Implementing Agency Risk	
- Capacity	Н
- Governance	M
Project Risk	
- Design	M
- Social and Environmental	M
- Program and Donor	M
- Delivery Monitoring and Sustainability	M
- Other (Restrictions on entry to Gaza)	Н
Overall Implementation Risk	Н

B. Description

- 46. Project implementation could experience delays due to GEDCO's lack of capacity and knowledge of project management and Bank requirements. This risk is mitigated by requiring the PMU at PEA, which is currently implementing the multi-donor funded EUMP along with other donor-funded projects, to be responsible for the procurement, financial management and overall oversight of the implementation of the Project. In the meantime, GEDCO will be responsible for civil and installation works through its technical staff and local contractors who have experience in implementing similar projects in the past. The Utility Capacity Building component of the Project will also provide tools and IT systems to strengthen GEDCO's implementation and operational capacity.
- 47. Furthermore, during the first year of the Project, the Bank will conduct regular supervision missions including visits to Gaza about once a quarter, to ensure that implementation is proceeding as scheduled. Missions will include technical specialists with relevant experience to supervise and advise GEDCO on project activities and will also assess if additional support and training is required by the PMU and GEDCO during implementation.
- 48. The continued restrictions on entry to Gaza may delay or block the transfer of goods and materials to Gaza and therefore project implementation. To mitigate any potential restrictions of access to Gaza, the implementation of the proposed Project will initially follow successful arrangements for the supply of equipment and materials for the repair of the electricity networks in Gaza provided under the EUMP's Additional Financing. Procurement will be carried out by PEA and when movement restrictions are imposed, the materials supplied will be delivered and stored in PEA's warehouses in West Bank. The PEA will then coordinate with the Israeli authorities and GEDCO on the transfer of materials to Gaza. GEDCO will also be responsible for the civil and installation works utilizing its staff and local contractors to minimize impact on installation aspects once material delivery is fulfilled.

49. Finally, the cooperation with the IsDB in financing the proposed Project would foster new cooperation between the Bank and the IsDB in the rehabilitation of Gaza's infrastructure, but it could also impose a project implementation risk if financing arrangements lag or are inadequate. Thus far, coordination between the Bank and the IsDB team has been adequate during project preparation and agreements have been reached on the financing modality, i.e. it will be based on parallel financing. Nevertheless, the IsDB financing will not be secured until the project is submitted for approval by the IsDB management. Therefore, the project components are designed so that the financing of the two institutions is not tied to the same sub-components.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analyses

Economic Analysis

- 50. There are five major economic benefits from the rehabilitation and expansion of the electricity networks in Gaza:
 - **Reduction in accident risk** as a result of the rehabilitation and expansion of the electricity networks with safer installation and the construction of underground cables.
 - **Decrease in supply interruptions** caused by network outages as a result of the network rehabilitation and expansion. The value of this decrease in interruptions varies among the rehabilitated networks depending on the level of current interruptions.
 - Ability to serve additional load growth. The expanded and rehabilitated electricity networks in Gaza will enable GEDCO to serve new consumers and new areas being built with electricity.
 - **Reduction in operating cost.** GEDCO's operating costs will also be reduced since the new underground cables and rehabilitated networks and installation of new meters will require fewer repairs and maintenance than existing networks.
 - Reduction in system technical losses and non-technical losses. The network systems in Gaza have significant losses, estimated at 30 percent of the power supplied. As a result of the rehabilitation, both technical losses and non technical losses will be reduced in the project areas. The reduction in technical losses, estimated at about 50% of the total reduction in losses resulting from the project¹⁷, will result in additional supply to the consumers while the reduction in the non technical losses and improved collections will result in additional revenue to GEDCO which therefore will improve its financial performance and ability to sustain its operation.
- 51. An economic analysis was done for the project in which only two benefits were quantified, the reduction in technical losses and the increase in ability to serve load growth. The reduction in technical losses, when the project is completed, is estimated to be about 78 GWh per year which is worth about US\$8.6 million per year at current electricity prices. Using current electricity prices as a measure of the benefit from saving electricity is very conservative. It is

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¹⁷ The project is expected to result in 10% reduction of network losses as indicated in Annex 1. Since a large part of the project investments is targeting improved performance of the distribution networks, it is assumed that 50% of the reduction will be in the technical losses and the remaining 50% in the non-technical losses.

likely that customers would be willing to pay higher prices for electricity than those currently charged because the system is supply constrained. Nevertheless current electricity prices were used to be conservative. No benefit was assumed in the economic analysis for the reduction in non-technical losses also estimated at about 78 GWh. This again is a conservative assumption and was made because, while GEDCO benefits and its financial situation would improve, no additional electricity will become available from reducing non-technical losses as it is already being used by consumers. The value of the increase in load supplied due to the expansion of the distribution networks and construction of the underground cables¹⁸ was also measured in a conservative way with only the difference between the retail price of electricity and the purchase price from Israel considered a benefit to Gaza net of an estimate of the increased costs to GEDCO for delivering this extra electricity. A much larger benefit could have been attributed to the additional load supplied since it is likely that customers would have been willing to pay much more than current retail prices for additional electricity.

- 52. In spite of these very conservative assumptions the real economic rate of return on the project (ERR) is 35%. This high rate of return results almost entirely from reducing technical losses. If the technical loss reduction is cut by 50 percent (e.g. on 25% of the total 10% loss reduction) then the real ERR would be 22 percent, which is still reasonable.
- 53. This high rate of return for the Gaza project is not unreasonable considering that: (i) the Gaza network system is in poor condition and desperately needs repair and rehabilitation, which produces high rates of return on investment, and (ii) high rates of return on net work projects, while not normal, are not that uncommon. For example the APL 6 Project in Turkey (August 2010, Report No 55038-TR) had 7 network sub projects averaging about US\$32 million in cost each. These subprojects had ERRs ranging from 17 percent to 148 percent with a weighted average of 76 percent.

Financial Analysis

54. *GEDCO's Past Performance:* GEDCO¹⁹ was established in Gaza in August 1998 as a shareholding company with a share capital of about 150 million NIS. However, the operational performance of the company is unsatisfactory with total accumulated operating losses standing at about NIS 711 million between 2001 and 2010. GEDCO's financial auditor has for several years expressed doubt over the ability of the company to meet its commitments and fund its operating costs. Given the volatile political situation in Gaza, GEDCO's ability to operate is greatly dependent on the provision of funds by PEA and external assistance.

¹⁸ The project is expected to result in at least 40 MVA increase in network capacity as indicated in Annex 1. The ongoing rehabilitation of the GPP transformer substation, financed by IsDB, is expected to improve the transmission capacity of the substation, but nevertheless, the production from GPP is not expected to increase beyond 80 MW given the continued fuel supply constraints to the plant. Since the GPP operates now at capacity between 30MW to 60 MW, then it is assumed in the economic analysis that only 20 MW of additional electricity supply will be available and carried over the rehabilitated networks and new underground cables.

¹⁹ GEDCO follows a January to December financial year and the currency for financial reporting is New Israeli Shekels (NIS). The financial analysis is based on audited figures from 2006 to 2010 and projections for 2011 to 2015.

55. While GEDCO experienced an average growth of about 10% in sales during 2001 to 2007, sales have stagnated since 2008 after the conflict when significant electricity infrastructure was destroyed. The purchase cost of electricity has grown marginally at an average 4 percent after the war. Collections have been equally dismal for several years but increased to about 41 percent of billed in 2010 from 28 percent the previous year. While the cost of purchasing electricity has increased since 2007 from 0.33 NIS/kWh to 0.38 NIS/kWh in 2010, GEDCO's average retail tariff was constant at 0.42 NIS/kWh leaving it with an inadequate margin to cover its operating cost. The problem is further compounded by high technical and non-technical network losses which stood at about 30 percent in 2010. The following table summarizes the financial performance of GEDCO from 2006 to 2010.

Past Financial Performance of GEDCO (2006-2010) in NIS Million

	2006	2007	2008	2009	2010
Energy Purchased (GWh)	1,129	1,483	1,439	1,554	1,554
Energy Sold (GWh)	858	1,031	1,074	1,088	1,081
System Losses (%)	24%	30%	25%	30%	30%
Average Purchase Rate (NIS/kWh)	0.34	0.33	0.38	0.38	0.38
Average Billing Rate (NIS/kWh)	0.40	0.42	0.42	0.42	0.42
Total Operating Revenue	342	431	449	455	452
Cost of Power Purchase	381	487	544	588	583
Salaries, Repairs & Others	38	42	58	49	45
Depreciation, Bad Debts & Other Provisions	19	19	19	20	20
Operating Income	(65)	(93)	(122)	(157)	(171)
Net Financing Revenues	(0)	(0)	1	0	1
Net Income After Tax	(66)	(93)	(120)	(156)	(171)
Account Receivable	1,075	1,355	1,687	2,013	2,281
Collection as a % of Billing	66%	35%	26%	28%	41%

- 56. *Financial Targets:* Due to the very difficult operating situation on the ground in Gaza, including limitations on GEDCO's ability to increase tariffs, performance targets will only focus on improving the utility's financial sustainability through higher collection rates and reduction in network losses. This is also in line with Component 1 of the project which aims to initiate the piloting of prepaid metering in Gaza and the provision of meter reading equipment to facilitate accurate billing as well as to rehabilitate and improve the performance of the electricity networks in Gaza. The targets for collections and network losses are outlined in Annex 1.
- 57. *Financial Projections:* Based on GEDCO's past performance from 2006-2010, projections for 2011-2015 were derived using agreed to assumptions and financial targets for 2011-2015. The projections were modeled around three scenarios using varying assumptions that include collections rate, network losses and tariff adjustments. All three scenarios indicate that GEDCO is unlikely to attain breakeven during the life of this project however the loss in operating income would decrease with appropriate measures to address the three assumptions outlined above. An analysis of the three scenarios is presented below.
- 58. The *pessimistic scenario* assumes no improvement in collections or system losses. It also assumes a constant average tariff rate of NIS 0.42/kWh. This implies an escalation in net operating losses over the years as well as a growing accounts receivable due to poor collections. If the current status quo prevails in GEDCO, it is clear that its financial viability will continue to deteriorate.

Summary Forecast GEDCO Financial Performance (NIS Million) - Pessimistic Scenario

	2011	2012	2013	2014	2015
Average Billing Rate (NIS/kWh)	0.42	0.42	0.42	0.42	0.42
System Losses (%)	30.5%	30.5%	30.5%	30.5%	30.5%
Revenues from Electricity Sales	470	489	509	529	550
Total Operating Expenses	706	749	801	857	917
Net Income Before Tax	(212)	(234)	(266)	(300)	(338)
Accounts Receivable	2,564	2,857	3,162	3,479	3,810
Collection as % of Billing	40%	40%	40%	40%	40%

59. The *base case scenario* follows the performance targets the Project aims to achieve. It assumes no tariff increase, a reduction in system losses and an improvement in collections performance. Although net operating losses will continue to increase, they will decrease relative to the pessimistic scenario. Moreover, GEDCO's accounts receivable will also decrease as a result of higher collections thereby improving its ability to meet its payables.

Summary Forecast GEDCO Financial Performance (NIS Million) - Base Case

	2011	2012	2013	2014	2015
Average Billing Rate (NIS/kWh)	0.42	0.42	0.42	0.42	0.42
System Losses (%)	30%	29%	26%	23%	20%
Revenues from Electricity Sales	473	499	541	586	633
Total Operating Expenses	706	749	801	857	917
Net Income Before Tax	(208)	(224)	(231)	(241)	(251)
Accounts Receivable	2,565	2,840	3,111	3,345	3,535
Collection as % of Billing	40%	45%	50%	60%	70%

60. The *optimistic scenario* in addition to reducing system losses and improving collections, also assumes an annual increase of 5 percent to the average tariff rate. An increase in tariffs here implies a reduction in operating losses but an increase in accounts receivable due to the higher tariff. On the whole, this scenario presents GEDCO's best ability to attain, at a minimum, breakeven over time in meeting its operating expenses. However, further improvements in collections and reduction in network losses beyond this project would also have a positive impact. This scenario will not be pursued by the project in view of the economic hardship of the people of Gaza and the decision to increase tariffs will be left with PERC and GEDCO.

Summary Forecast GEDCO Financial Performance (NIS Million) - Optimistic Scenario

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	2011	2012	2013	2014	2015
Average Billing Rate (NIS/kWh)	0.42	0.44	0.46	0.48	0.51
System Losses (%)	30%	29%	26%	23%	20%
Revenues from Electricity Sales	473	524	597	678	769
Total Operating Expenses	706	749	801	857	917
Net Income Before Tax	(208)	(197)	(173)	(144)	(107)
Accounts Receivable	2,565	2,854	3,152	3,423	3,654
Collection as % of Billing	40%	45%	50%	60%	70%

B. Technical

61. The technical reconfiguration and rehabilitation components are based on a technical assessment of options ranging from rehabilitation, to repairing/renewing the system or replacing the system entirely in the five Governorates. The reconfiguration of the distribution systems are selected on least-cost basis. Specifications for equipment are consistent with the design and structure of the existing network and include appropriate safety measures. The Project will employ modern technological practice in rehabilitation/reconfiguring the distribution networks; (a) underground cabling technology to replace rundown overhead electric MV lines in urban areas as well as expansion of the MV networks; (b) aerial bundled conductor (ABC) for the rehabilitation and expansion of the LV network; (c) modern efficient and standard equipment; and (d) the phase-out of nonstandard medium and low voltages. This will help provide reliable and efficient operation of the distribution system and reduce the cost of network maintenance and expansion as well as reducing the system losses and improving collection.

C. Financial Management

- 62. Financial Management (FM) and Disbursement will be carried out by the PEA, through the existing PMU which is currently handling the implementation of the ongoing World Bank and donor-financed EUMP. The PMU would act as the main counterpart to the Bank for all FM and disbursements aspects of the project. Therefore, the PMU will be responsible for preparing and issuing the annual work program and operating budgets as well as all the progress and financial reports, the Interim Financial Reports (IFRs) and the annual audited financial reports and technical audit reports. It will also be responsible for contract management including the review and approval of consultants' deliverables, the receipt/inspection and acceptance of goods, and the release of payments to the consultant/supplier/service provider/contractor in accordance with the signed contracts and maintaining related financial records. PEA, through its Gaza-based staff will be responsible for direct coordination on contract execution in the field and monitoring with GEDCO as well as reporting accordingly to the PMU.
- 63. The PMU is staffed with a financial management team, experienced in implementing similar projects under the Bank's FM guidelines, policies and procedures. However, due to the nature of the project which entails large technical contracts for the rehabilitation of old electricity networks and expansion of new network facilities including the supply and installation of a wide variety of IT hardware and software and other electricity tools and equipments for GEDCO, the risk of slow disbursement is present as a result of GEDCO's weak FM and contracting capacity. Moreover, the execution of project activities in Gaza where access by the PMU might be restricted due to the security situation also presents a risk in terms of reasonable implementation progress and/or for goods not actually supplied and installed.
- 64. To mitigate these risks and to ensure efficient project implementation disbursement and financial management aspects will be centralized at the PMU, no funds will be transferred to GEDCO, and project payments related to works conducted will be reviewed and verified by the PEA technical team based in Gaza. They will certify all payment requests submitted by contractors/suppliers as a sign that payment requests are in line with physical progress for works contracts and for goods actually supplied and installed. Then the payment requests will be

forwarded to the PMU for the FM staff review and MoF Financial controller pre-verification, before being signed by the authorized signatories.

- 65. A private external auditor will be hired on a competitive basis to perform annual financial and technical audit for the Project, in accordance to TOR acceptable to the Bank. In this context auditors should hire/use relevant technical specialists as needed to perform the technical audit, the audit TOR will assess the effectiveness of internal controls within PMU as well. Annual audited financial statement for GEDCO along with management letter will be required to be submitted for review, with sub-item reports for grant received by activity (works, goods, assets) under this project from the Bank and other financier as well. Additionally, technical support and capacity building initiatives will be taking place through the project for GEDCO. The manual of financial Procedures will be updated to include all project FM procedures, internal controls, and funds and documentation flow, submitting final and acceptable manual will be condition of grant effectiveness.
- 66. The project will be financed by the Bank and the IsDB. Parallel financing will be used. Bank's funds will be disbursed through a separate Designated Account (DA) opened by the MoF under the Central Treasury Account and operated/managed by the PMU. Separate accounting records will be maintained for each financier, with each financier's funds spent on separate components and activities as agreed to between the Bank, PEA and the IsDB. Therefore the Bank will finance 100% of its related activities.
- 67. Semiannual interim unaudited financial reports (IFR) will be submitted to the Bank within 45 days after the end of each reporting period. The Grant Agreement will require the submission of annual Audited Project Financial Statements (FS) within six months after year-end. Project Financial Statements will be audited in accordance with international audit standards by an independent, experienced, and internationally recognized audit firm acceptable to the World Bank and recruited on a competitive basis, additionally; annual technical audit will be preformed, in this context audit should use relevant technical specialists as needed to perform the technical audit. The cost of the audit will be financed from the Grant proceeds. The audited annual project financial statements will be publicly disclosed. IFR and annual audit FS will be comprehensive covering full project activities and funding sources and will provide separate reporting for each financier. Audit financial statement along with management letter for GEDCO to be submitted on annual basis with sub-item reports for donation received by activity (works, goods, assets) under this project from the Bank and other financier as well; GEDCO report shall be submitted not later than six months after year end.
- 68. The Project FM arrangement and activities will be supervised bi-annually. The financial supervision activities will include, inter alia, a review of IFRs, review of annual audited financial statements, management letters, technical audit reports, GEDCO annual financial statements and management letter as well as timely follow up on issues raised by the auditor and review of SOEs if needed.
- 69. The implementing entities are compliant with the Bank's financial management requirements; and there are no overdue audit reports and interim financial reports from these entities.

D. Procurement

- 70. Procurement for the Project shall be carried out in accordance with the World Bank's "Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits and Grants" by World Bank Borrowers published in January 2011, for goods, works, non-consulting services, and the Bank's "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" published in January 2011, for Consultants' Services, the accompanying standard bidding documents and the Grant Agreement. World Bank's "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and updated January 2011, shall apply to the Project.
- 71. Project procurement will be carried out by the PEA, through the PMU for the ongoing Bank and donor-financed EUMP, which would act as the main counterpart to the Bank for all procurement aspects of the Project. GEDCO will be responsible, in coordination with and support from PEA, for the design and preparation of the technical specifications of the project components. The PMU will also be responsible for contract management including the review and approval of consultants' deliverables and the receipt/inspection and acceptance of goods and works, and for the release of payments to the consultant/supplier/service provider/contractor in accordance with the signed contract. GEDCO shall be responsible for supervising the execution of the installation and civil works and for coordinating the consultants' and service providers' activities on a day-to-day basis, including the provision of agreed inputs/facilities. PEA, through its Gaza-based staff will be responsible for direct coordination on contract execution and monitoring with GEDCO as well as reporting accordingly to the PMU.
- 72. The PMU procurement staff has acquired substantial experience in implementing similar projects following the Bank's Procurement Guidelines. Procurement performance for EUMP has been satisfactory. However, the coordination and the interaction of the PMU and GEDCO throughout project implementation may present a potential challenge that could delay project implementation. Further deterioration of the political circumstances and increased restrictions imposed on movement of people and goods into Gaza may delay or hinder the supply of goods/equipment necessary for the execution of the works and may impede the implementation of the technical assistance component. Information technology and systems are among the most challenging procurement given the diverse technical content, the rapid technological change and the complex service requirements, which require specialized expertise in defining the needs, preparing the technical design, managing the procurement process and supervising contract execution.
- 73. To ensure efficient implementation of project procurement, the project implementation structure will be established and the detailed responsibilities of the PMU, GEDCO and PEA staff will be defined, as part of the Project Operational Manual. PEA staff operating in Gaza will be assigned to the PMU, the Project Operational Manual including procurement procedures will be prepared for the proposed Project to reflect project procurement methods and procedures, and additional procurement and contract management training to PEA and GEDCO staff will be provided. An international consulting firm, financed by the EC is assigned the responsibility for assisting the PMU and GEDCO in the identification and development of the technical design and

specifications including the preparation of the bidding documents, for the IT hardware and software and for supervising contract execution.

- 74. During appraisal, a procurement plan (PP) for the project implementation was prepared and agreed between the Bank, the PEA, PMU and GEDCO. It specifies the procurement packages, estimated cost, methods and schedule. The PP will be updated at least annually or as needed to reflect actual project implementation needs.
- 75. In line with Bank policies, the prior review thresholds for West Bank and Gaza have been increased. The Bank's prior review thresholds for this project were set based on the existing procurement capacity and the identified procurement risks. The prior review thresholds for Substantial risk rating Implementing Agencies will apply to this project. In addition to prior review, the Bank will carry out at least two supervision missions per year during which a follow up and quality control of procurement /contract management matters will be undertaken.

E. Social (including Safeguards)

- 76. Overall, the social development impacts of this project are expected to be positive. Some of the direct and indirect benefits include: (i) increasing access to electricity by expanding the electricity networks in Gaza; (ii) reducing physical dangers caused by old electrical networks away from houses; (iii) providing employment opportunities for engineers, technicians, and local contractors to work in the implementation of the project; (iv) enhancing citizen electricity system satisfaction with the services provided by GEDCO in the project areas and building of public trust in GEDCO; and (vii) contributing to increasing productivity of business, hospitals, schools and other services through reduced blackout periods due network outages.
- 77. Potential negative impacts of the project are in general limited to the project construction phase and may include noise, dust, obstruction of access to business and houses, etc. These negative impacts are manageable and their mitigation is addressed in the project Environmental and Social Management Plan (ESMP). The project will not require any land acquisition as the rehabilitation of the medium and low voltage networks will be carried out on existing facility sites and on public land and on municipality's city streets for the network expansion. Therefore, the project financed under this Grant will not entail any resettlement or land acquisition and will not trigger the Involuntary Resettlement OP 4.12 safeguards policy.
- 78. There is a potential problem of the non-acceptance of the subcomponent related to prepaid meters, especially by the poor, because of the fear of being unable to pay for and, therefore, have access to electricity. In order to ameliorate this problem, consultations will be organized to discuss the piloting of the prepaid meters, which will not be targeting the poor in the first phase. In addition, GEDCO is working on developing a social assessment of the best way to pilot and implement the prepaid meter system, including taking into consideration access for the poor.

F. Environment (including Safeguards)

79. The Project is classified as environmental category B and designed to ensure compliance with the requirements of the Environmental Assessment (OP 4.01) safeguard policy. An

environmental and social impact review was undertaken by the World Bank during project preparation and noted that project activities could result in minor, temporary, site-specific and reversible adverse environmental impacts. The review also underscored the largely positive social impacts that will be generated through the project. The PEA and GEDCO prepared an Environmental and Social Impact Assessment (ESIA) including an Environmental and Social Management Plan (ESMP) for the project that includes mitigation measures for potential environmental impacts during construction and operation. The policy on Physical Cultural Resources (OP 4.11) will not be triggered by project activities due to the nature and location of the investment projects. This was verified during project preparation and confirmed by the ESMP. No other environmental policies are triggered as a result of project activities.

- 80. The PMU and GEDCO will monitor the implementation of the ESMP and report to the World Bank on its compliance during project implementation. Since GEDCO will be responsible for implementation the contracts/works financed under this project, it will therefore report to the PMU on implementation of contracts (including compliance with ESMP). The PMU will in turn aggregate information and report to the Bank in the project progress reports on the implementation of the ESMP. A separate annex will be added to the progress reports on ESMP compliance, by sub-component. Relevant GEDCO staff was trained by the Bank on safeguard policies and requirements. Capacity of these staff as well as of GEDCO's Environment Safety Unit will be continuously monitored and strengthened during implementation. This will help with both ensuring compliance with the ESMP and reporting of ESMP implementation in the progress reports.
- 81. A more detailed review of the project safeguards issues is presented in Annex 3 and in the project's Integrated Safeguards Data Sheet (ISDS). A final ESMP which was prepared by GEDCO was reviewed and found satisfactory by the World Bank. The ESMP was disclosed locally and in the World Bank's *Infoshop* on November 29, 2011.

G. Grant Conditions and Covenants

82. Effectiveness Conditions:

- A Subsidiary Agreement is signed between the PLO and the PA;
- The PEA is to enter into arrangements satisfactory to the Bank, to ensure that goods and services financed out of the proceeds of the Grant for the benefit of GEDCO shall be made available to GEDCO.
- The PEA shall submit to the Bank a Project Operational Manual for the Project.

83. Audit Covenants:

• The PA shall submit audited project financial statements and shall cause GEDCO to carry out each year financial audits of their financial statements by independent auditors acceptable to the Bank and to submit such audits to the Bank no later than six months after the end of each fiscal year. The project audits shall include physical audits of the progress and status of the project works, goods and materials purchased under the project.

84. *Implementation Conditions:*

- PEA shall provide GEDCO with 10,000 prepaid meters by December 31, 2012 to use in the prepaid metering pilot project in Gaza that will be based on a technical and social assessment including public consultation for the pilot project and an action plan to improve GEDCO's billing collection in order to meet the collections targets in Annex 1. The delivery of the prepaid meters to GEDCO will be based on a time-bound implementation plan for installation of the meters prepared by GEDCO and agreed with PEA as well as on actual progress of meter installation.
- The estimated period for the project implementation is 3 years. The Closing Date of the Project would be December 31, 2015. The PA will ensure that the PEA maintains at all times during project implementation the PMU with resources and staff necessary for project implementation and satisfactory to the Bank
- PEA, through the services of an existing international consulting firm, will identify and develop technical designs and specifications including the preparation of the bidding documents for the IT System subcomponent financed under Component 2. In addition the consulting services will support implementation of institution building for GEDCO's financial, accounting and administrative management.

H. Policy Exceptions and Readiness

- 85. The Project does not require any exceptions from Bank policies. Status of the regional criteria for readiness for implementation is as follows:
 - The PMU at PEA is already operational and has satisfactory staffing;
 - Financial Management Assessment has been completed;
 - Procurement Capacity Assessment has been completed, and procurement plan will be finalized during negotiations;
 - Disclosure requirements: The ESMP for the projects investment components was disclosed in *Infoshop* on November 29, 2011; and
 - Bill of quantities and draft technical specifications for the investment projects under Components 1 have been prepared. Furthermore, the PMU has extensive experience with the standards bidding documents for the projects under component 1. PEA has already made the services of the international consulting firm available to GEDCO to prepare the technical specifications and bidding documents for the IT System financed under Component 2. Subsequently, the draft bidding document for the IT System has been prepared and is under review

Annex 1: Results Framework and Monitoring

WEST BANK AND GAZA: Gaza Electricity Network Rehabilitation Project Results Framework

Project Development Objectives											
PDO Statement											
The project developmen	nt objectiv	re is to rehabilitate a	nd expand the ele	ectricity netwo	rks in Gaza in	order to impro	ve their reliabi	lity and perfor	mance.		
Project Developmen	ıt Object	ive Indicators									
	Cumulative Target Values Data Source/ Responsibility for										Responsibility for
Indicator Name	Core	Unit of Measure	Baseline	YR1	YR2	YR3	YR4	End Target	Frequency	Methodology	Data Collection
System Loss Reduction		Percentage	30.00 (1)	29.00	26.00	23.00	20.00	20.00	Semi-annually GEDCO, Master Plan, Audit Reports, Progress Reports GI		GEDCO/PMU
Increase in Collection		Percentage	40.00 (2)	45.00	50.00	60.00	70.00	70.00	Semi-annually	GEDCO, Master Plan, Audit Reports, Progress Reports	GEDCO/PMU
	ļ	,				,	·	!	•	•	
Intermediate Result	s Indicat	tors									_
					Cum	ulative Target V	alues			Data Source/	Responsibility for
Indicator Name	Core	Unit of Measure	Baseline	YR1	YR2	YR3	YR4	End Target	Frequency	Methodology	Data Collection
Electricity Master Plan for Gaza		Text	Consultant procurement initiated	Consultant procurement initiated	Consultant mobilized	Final master plan complete	Final master plan complete	Final master plan complete	Semi-annually	GEDCO, Physical Audit Reports, Progress Reports	GEDCO/PMU
Incremental increase in MVA capacity of MV		Number	0.00	0.00	20.00	40.00	40.00	40.00	Semi-annually	GEDCO, Physical Audit Reports, Progress Reports	GEDCO/PMU

⁽¹⁾ The values for the network losses and collection will be verified in the annual financial audits of GEDCO

⁽²⁾ The end targets are for the values of the total system losses and collection while the yearly targets are for their incremental improvements.

Project Development Objective Indicators								
Indicator Name	Description (indicator definition etc.)							
System Loss Reduction	Reduction in total system losses							
Increase in Collection	Improve collections as a percent of billing							
Intermediate Results Indicators								
Indicator Name	Description (indicator definition etc.)							
Electricity Master Plan for Gaza	Complete a Gaza electricity master plan							
Incremental increase in MVA capacity of MV Feeders	Incremental increase in MVA capacity of MV Feeders							

Annex 2: Detailed Project Description

WEST BANK AND GAZA: Gaza Electricity Network Rehabilitation Project

- 1. The project development objective is to rehabilitate and expand the electricity networks in Gaza in order to improve their reliability and performance. In addition, the Project will include a significant technical assistance component for capacity building of GEDCO to improve its financial, accounting and administrative management as well as utility operations.
- 2. The project components were identified after a detailed review of assessments performed by the PEA and GEDCO and visits to project sites were carried out by the Bank. The investment components proposed for financing are of proven design and provide a streamlined approach focusing on financing conventional projects for rehabilitation of electricity networks to improve their operations and expand their capacity. The project design also assumes a holistic approach by also including a technical assistance component to enhance GEDCO's capacity to sustain the operation of its network and improve its financial and accounting management,
- 3. In order to meet the development objective, the project will provide financing and implementation support for the following components and sub-components:
- 4. **Component 1: Network Rehabilitation and Expansion.** The investment projects, and associated cost estimates, financed²⁰ under this component include the following:
 - (a) Subcomponent 1: Rehabilitation of Medium and Low Voltage Networks. This subcomponent includes the following proposed projects:
 - Rehabilitation of Medium Voltage Networks (US\$ 460,000 financed by the World Bank): This project will rehabilitate deteriorated medium voltage networks in the five governorates²¹ in Gaza. The project will include, among others, replacing and installing new poles and cables, transformers and switches.
 - Rehabilitation of the Low Voltage Networks (US\$ 1,770,000 financed by the World Bank). This project will rehabilitate deteriorated low voltage networks in the five governorates in Gaza suffering from unsafe installation, high losses and low voltages. The project will also include, among others, replacing and installing new poles and cables for about 139 km of low voltage networks.
 - (b) *Subcomponent 2: Network Supply Improvement.* This subcomponent includes the following activities for the construction of new network facilities to improve the performance of the electricity supply in Gaza:
 - New 22 kV underground feeders from the Gaza Power Plant (US\$ 3,000,000 financed by the IsDb): The project will construct three new 22 kV underground feeders from the Gaza Power Plant (GPP) to load centers in Gaza city. The feeders will be needed

²⁰ The cost estimates exclude contingencies.

²¹ Gaza Governorates: North, Gaza, Middle, Khanyounis and Rafh

to support evacuation of additional electricity supply from GPP which will become available when the ongoing expansion of the GPP is completed. The total length of the feeders will about 36 km and will add a total of 36 MW of new network capacity.

- Reconfiguration and Expansion of Medium and Low Voltage Networks (US\$ 4,410,000 financed by the IsDB): The project will finance an expansion of the existing distribution networks in Gaza's five governorates through the installation of medium and low voltage networks and transformers to reduce loading of existing networks, reduce losses and improve reliability of electricity supply. The project will install, among others, 24 km of new overhead networks, 10 km of new underground cables, and new distribution transformers.
- New 22 kV underground feeders from the proposed 161 kV north Substation (US\$1,710,000 financed by the World Bank): The project will construct 22 kV underground feeders from the proposed 161 kV North Substation to Gaza and North Governorates. The new feeders will also be designed to increase the reliability of the 22 kV network in Gaza through ring network development.
- (c) *Subcomponent 3: Collection Improvement.* This subcomponent includes the purchase of mobile billing PCs and installation of prepaid meters and supporting equipment as follows:
 - Supply of Mobile Billing PCs (US\$230,000 financed by the World Bank): This project will finance the supply of meter reading equipment to facilitate reading, recording and issuing electricity bills at consumer sites. GEDCO will purchase about 80 units, which will be used among the existing 96 Meters Readers. About 50% of the customers will benefit from the mobile billing system.
 - Installation of Prepaid Meters: The PEA will supply 10,000 single and three phase Prepaid Meters to Gaza. The delivery will take place by end of 2012. These meters were purchased under the ongoing EUMP/Phase V Program Project and financed by the Agence Francaise De Développement (AFD) and the Governments of Norway and Sweden. The installation of these meters will constitute a pilot project for subsequent scaling up installation of prepaid metering in Gaza. Before the start of implementation of the pilot project, GEDCO will prepare an action plan for the project outlining technical challenges and mitigation measures related to operation of the prepaid meters under low voltage conditions, as in Gaza, and consumer awareness, acceptance and social impact of prepaid meters.
- 5. The design and technical specifications of the above project will employ modern technological practice in rehabilitation/reconfiguring the distribution networks including; (a) underground cabling technology to replace rundown overhead electric MV lines in urban areas as well as expansion of the MV networks; (b) aerial bundled conductor (ABC) for the rehabilitation and expansion of LV network, (c) modern efficient and standard equipment; and (d) the phase-out of nonstandard medium and low voltages. This will provide reliable and

efficient operation of the distribution system and reduce the cost of network maintenance and expansion as well as reducing the system losses and improving collection.

- 6. **Component 2: GEDCO Capacity Building and Technical Assistance to PEA.** The aim of this component is to increase the capacity of GEDCO in system operation and management. This component will finance²² the following:
 - (d) *Subcomponent 1: Supply of Vehicles and IT Systems to GEDCO*. This subcomponent will finance the following:
 - Supply of Vehicles (US\$ 940,000 financed by the World Bank): This project will finance the supply of vehicles necessary for the operation, maintenance and repair works of the electricity networks in Gaza. These vehicles will be transferred to Gaza from the PEA warehouses in West Bank.
 - Supply of IT hardware and software and tools (US\$1,440,000 financed by the World Bank): This project will finance the supply and installation of a wide variety of IT hardware and software proposed by GEDCO for the technical operation of Gaza electricity networks and financial and accounting management of GEDCO. Specific IT Systems (software and hardware) proposed under this project include, among others:
 - o Information Management System to support integrated financial, accounting, administration management and customer services.
 - o Supporting IT network infrastructure and peripherals.
 - Supply of Geographic Information System (GIS) (US\$310,000 financed by the World Bank) to support network information management, planning and operation. GEDCO to provide more details on the intended usage and structure for GIS.
 - Supply of Load Flow hardware and software (US\$170,000 financed by the World Bank) for network analysis and planning. GEDCO to provide more details on the intended usage and structure for the load flow hardware and software.
- 7. The PEA and GEDCO will use the services of an existing international consulting firm retained by PEA and whose contract is financed by the European Commission (EC) for the identification and development of the technical design and specifications including the preparation of the bidding documents for the above IT hardware and software subcomponents proposed for financing by the Project.
 - (e) Subcomponent 2: Technical Assistance to PEA including the following:
 - Consultancy (US\$500,000 financed by the World Bank): The Project will finance the hiring of a consulting firm to support PEA/GEDCO in preparing a master plan for the development of the electricity sector in Gaza.

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²² The cost estimates exclude contingencies.

- Financial Audit (US\$30,000 financed by the World Bank). The Project will finance the hiring of a local consulting firm to carry out auditing services on the Project Cost.
- 8. Cost estimates of the above project components including contingencies and financing resources for the above subcomponents are summarized in Table 1.

Table 1: Project Costs and Financing Resources (US\$ Million)

No	o Description Local		Foreign Foreign		Total		World Bank				IDB		
	·		· ·	V.A.T			Local	Foreign	Total		Local	Foreign	Total
	Component 1 : Electrical Networks Rehabilitation and Expansion												
C1.1 Rehabilitation Electrical Network :													
Α	Rehabilitation Medium Voltage Networks	0.10	0.31	0.36	0.46		0.10	0.36	0.46				
В	Rehabilitation Low Voltage Networks	0.39	1.20	1.38	1.77		0.39	1.38	1.77				
<u>C1.2</u>	C1.2 Network Supply Improvement:												
Α	Construction of new 22KV UG feeders from the Gaza Power Plant	0.95	2.05	2.05	3.00						0.95	2.05	3.00
I R	Reconfiguration and expansion of MV & LV network (including transformers)	1.12	3.29	3.29	4.41						1.12	3.29	4.41
С	Construction of new UG 22KV Feeders from the North Substation-Phase1	0.46	1.09	1.25	1.71		0.46	1.25	1.71				
<u>C1.3</u>	C1.3 Increase Collection :												
Α	Mobile billing system (HHU)		0.20	0.23	0.23			0.23	0.23				
	Total of Component1 without Contingency		8.15	8.56	11.57		0.95	3.21	4.17		2.07	5.34	7.41
	Physical Contingency 5%		0.41	0.43	0.58		0.05	0.16	0.21		0.10	0.27	0.37
	Price Contingency (Local 3%, Foreign 3%)		0.24	0.26	0.35	L	0.03	0.10	0.12	L	0.06	0.16	0.22
	Sub Total of Component 1(MUS\$)	3.26	8.80	9.24	12.50		1.03	3.47	4.50	L	2.23	5.77	8.00

Table 1: Project Costs and Financing Resources (US\$ Million)

No	No Description		Foreign	Foreign including	Total			World Bank				IDB	
	•		•	V.A.T			Local	Foreign	Total		Local	Foreign	Total
		С	ompone	nt 2 : Cap	acity Bu	ild	ings			_			
<u>C2.1</u>	Supply Equipment for the Utility:												
Α	Vehicles phase1 (5 basket)		0.40	0.46	0.46			0.46	0.46				
В	Vehicles phase1 (1Crane+3 basket)		0.42	0.48	0.48			0.48	0.48				
C.1	Geographical Information System (GIS)		0.27	0.31	0.31			0.31	0.31				
C.2	Utility Load flow (HW/SW)		0.15	0.17	0.17			0.17	0.17				
D	Utility IT system (HW/SW)		1.26	1.44	1.44			1.44	1.44				
<u>C2.2</u>	Consultancy		-		•			•					
Α	Gaza Power Master Plan		0.46	0.50	0.50			0.50	0.50				
В	Financial Audit		0.03	0.03	0.03			0.03	0.03				
	Total without Contingency		2.99	3.40	3.40			3.40	3.40				
	Price Contingency (Local 3%, Foreign 3%)		0.09	0.10	0.10			0.10	0.10				
	Sub Total of Component 2(MUS\$)	0.00	3.08	3.50	3.50		0.00	3.50	3.50		0.00	0.00	0.00
,	Total Cost of component 1 and 2 (MUS\$)		<u>11.9</u>	<u>12.7</u>	<u>16.0</u>		<u>1.0</u>	<u>7.0</u>	<u>8.0</u>		<u>2.2</u>	<u>5.8</u>	<u>8.0</u>

Notes: 1- Foreign Costs for IDB items Excludes V.A.T

²⁻ V.A.T for All Items 14.5% Excludes Master Plan Consultant its 10%

³⁻ Physical Contingency = (Local Cost +Foreign Cost Including V.A.T) * 5%

⁴⁻ Price Contingency = (Local Cost *3%) +(Foreign Cost Including V.A.T *3%)

⁵⁻ Gedco Removed the Prepaid Meters Because Gedco has been informed the PEA will Supply the Prepaid meters to Gedco from another Grant.

⁶⁻ Gedco Removed the IT Consultant Because Gedco has been Informed that the Gedco IT Consultant will be added to The EC Support which Already undergoing to make IT Consultation for the Distribution Company in the west Bank and Gaza.

Annex 3: Implementation Arrangements

WEST BANK AND GAZA: Gaza Electricity Network Rehabilitation Project

Project Institutional and Implementation Arrangements

- 1. The proposed Project will be implemented by the existing PMU at the PEA, which is currently handling the implementation of other Bank and donor financed projects including the Electric Utility Management Project (EUMP). The PMU operates under the umbrella of the PEA and is fully staffed with a director, procurement, financial management, accountant and other relevant technical staff. Key members of the PMU have had satisfactory experience in implementing similar projects under the Bank's procurement guidelines, policies and procedures. Therefore, the PMU will be responsible for handling all procurement and financial management activities related to the Project
- 2. The GEDCO's Technical Department will be responsible, in coordination with and supported by the PEA, for the design and preparation of the technical specification of the project components. GEDCO will also be responsible for the implementation of the activities financed by the Project including the supervision of local contractors in Gaza for the installation and civil works and reporting to the PMU on progress and completion of the project activities as well as coordinating with the consultants retained for the Project's technical assistance component including implementation recommendations made for GEDCO's capacity building and streamlining its management and financial operations.
- 3. The PMU will also be responsible for coordination with GEDCO, the Bank, the IsDB and government authorities on the supply of equipment and materials to GEDCO and contract execution. The PEA already has two staff operating in Gaza and coordinating with the PMU and will be responsible for direct coordination on contract execution and monitoring with GEDCO as well as reporting accordingly to the PMU.

Financial Management, Disbursements and Procurement

Financial Management

4. The proposed Project will be implemented by the existing PMU at PEA, which is currently handling the implementation of the ongoing Bank and donor-financed EUMP. The PMU operates under the umbrella of the PEA and is fully staffed with a financial management team experienced in implementing similar projects under the Bank's FM guidelines, policies and procedures. Therefore, the PMU will be responsible for handling the FM and disbursements aspects for this project, including: preparing and issuing the annual work program and operating budgets, and all the progress and financial reports, the Interim Financial Reports (IFRs) and annual audited financial and technical audit reports. It will also be responsible for contract management including the review and approval of consultants' deliverables, the receipt/inspection and acceptance of goods and works, and for the release of payments to the consultant/supplier/service provider/contractor in accordance with the signed contract and maintaining related financial records.

- Implementation Arrangements: GEDCO will be responsible, in coordination with and support from Palestinian Energy Authority (PEA), for design and preparation for technical specification of the project component. GEDCO will be responsible for the implementation and supervision of installation and civil works related to rehabilitation and expansion of electricity networks. Due to PMU staff restriction access to Gaza and capacity of GEDCO and to ensure that payments made to contractors are in line with progress achieved, the PMU and through the PEA technical team based on Gaza (technical team includes engineers with relevant experience needed for monitoring installation and civil works network rehabilitation and expansion) will monitor contract execution, and each payment request submitted by contractors will be certified by the PEA technical team based on Gaza to ensure as a sign that payments are related activities which in line with physical progress and for goods actually supplied and installed, then payment will be transferred to PMU for review and process the payments. Goods under this project will be procured in accordance to Bank procurement guidelines by the PMU procurement department, PMU will be responsible for receiving goods and ensuring its compliance with contract signed, then PMU will transfer goods to Gaza to GEDCO, GEDCO will be required to submit audited financial statements with specific requirement to show what has been received from Goods/works under the project.
- 6. Under the capacity building component, IT system and vehicles will be financed. PEA and GEDCO will use the services of an existing international consulting firm retained by PEA and whose contract is financed by the European Commission (EC) for the identification and development of the technical design and specifications including the preparation of the bidding documents for the above IT hardware and software subcomponents proposed for financing by the Project. All project related supporting documents will then be transferred to PMU financial department for review and will be subject to Ministry of Finance financial Controller based at PEA pre-verification before being signed by authorized signatories and processed for payments. The existing manual of policies and procedures will be updated to reflect the implementation arrangements agreed on. Submission of a Final Project Operational Manual, acceptable to the Bank and to include an FM manual will be a condition of effectiveness.
- 7. **Project Financing:** The instrument used for this project is a grant. The project is estimated to cost a total of US\$16 million and will be financed by a US\$8 million grant from the World Bank's Trust Fund for Gaza and West Bank and a grant of US\$8 million from the Islamic Development Bank. The World Bank and IsDB financing will be provided on a parallel basis therefore, the Bank will finance 100% of its related activities agreed on. Separate records will be maintained for each financier, and each financier's funds will be spent on separate components and activities, as agreed between the Bank, PEA and the IsDB.

Project Components	Total Project Cost (US\$ Mln)	World Bank (US\$ Mln)	% Financing	Islamic Development Bank (US\$ Mln)	% Financing
Network Rehabilitation and Expansion Capacity Building and Technical Assistance	11.6	4.2	36%	7.4	64%
	3.4	3.4	100%	0.0	0%
Total Baseline Costs Physical contingencies Price contingencies	15.0	7.6	51%	7.4	49%
	0.6	0.2	33%	0.4	67%
	0.4	0.2	50%	0.2	50%
Approximate Total Project Costs Interest During Implementation Front-End Fees Total Financing Required	16.0	8.0	50%	8.0	50%
	0.0	0.0	0%	0.0	0%
	0.0	0.0	0%	0.0	0%
	16.0	8.0	50%	8.0	50%

- 8. The Financial Management Capacity Assessment for the PMU was carried out under the EUMP and updated during project preparation. The assessment evaluated the institutional capacity of the PMU to implement FM and disbursement under Bank Guidelines and reviewed the organizational structure for implementing the project. Furthermore, the assessment evaluated FM risks and made recommendations on mitigation measures for efficient FM under the project.
- 9. The assessment concluded that the overall project risk from a financial management perspective is **Substantial**, due to the nature of the project which entails large technical contracts for the rehabilitation of old electricity networks and expansion of new network facilities including the supply and installation of a wide variety of IT hardware and software and other electricity tools and equipment for GEDCO. The risk of slow disbursement is present as a result of GEDCO's weak FM and contracting capacity. Moreover, the execution of project activities in Gaza where access by the PMU might be restricted due to the security situation also presents a risk in terms of reasonable implementation progress and/or for goods not actually supplied and installed.
- 10. The following is a summary of the agreed actions/mitigation measures:
 - Procurement and contract management will be centralized at the PMU;
 - Disbursements and financial management aspects will be centralized at the PMU. The PMU will have the sole responsibility of disbursing project funds to suppliers, contractors and consultants. No funds will be transferred to GEDCO;
 - To ensure that project funds will be used for the intended purposes only, project payments will be reviewed and approved by the PEA's technical team based in Gaza, i.e. they and GEDCO will certify all payment requests submitted by contractors/suppliers as a sign that payment request are in line with physical progress for works contracts and for goods actually supplied and installed. Then the payment requests will be forwarded to the FM staff at the PMU for review and the MoF's Financial controller for pre-verification, before signing by the authorized signatories. Private external auditor will be hired on a competitive basis to perform reviews and annual financial and technical audits for the Project, in accordance to ToR acceptable to the Bank. in this context auditors should hire/use relevant technical specialists as

- needed to perform the technical audit. The audit TOR will assess the effectiveness of internal controls within the PMU/PEA;
- A segregated Designated Account will be opened by the MoF under the central treasury account, and will be used solely for this particular project;
- The Grant financial transactions will be maintained separately in the existing accounting software through the opening of a separate cost center for each financer to account and report for the grant's transactions. Complete supporting documentation for each contract, including signed contracts, invoices and other related supporting documents will be maintained by the PMU in an orderly manner, readily available for audit.
- Audit financial statement along with management letter for GEDCO to be submitted on annual basis with sub-item reports for donation received by activity (works, goods, assets) under this project from the Bank and other financier as well;
- The manual of financial procedures will be updated to include FM procedures and internal controls related for this project; submitting acceptable manual will be condition of effectiveness;
- Technical support and capacity building initiatives will take place through the project for GEDCO.
- Bank supervision.
- 11. **Staffing:** The PMU, through its financial team, will be responsible for managing grant resources and all related financial transactions, including but not limited to: preparing budgets (disbursements plans), record keeping, maintaining accounting system, filing of original supporting documents, payments request reviews, monthly designated account reconciliation, periodic statement of expenditures, semiannual interim financial reports (IFRs) and annual financial statements. The PMU's finance department includes a Financial Manager and three accountants with relevant accounting background and experience in handling the FM and disbursements aspects of a Bank funded project. The PMU staff are familiar with Bank FM and disbursements guidelines. The PMU is planning to hire an additional full time accountant to assist in handling the increasing work load.
- 12. **Accounting & Recording: Oracle**, a fully automated accounting system is in place.. The system is capable of capturing all project related transactions and has the flexibility to permit the establishment of separate cost centers within the main system, to track and report upon the use of project funds for each financier. The system was designed to generate segmental reports based on donor, component, sub-component and category. The existing accounting system, Oracle, will be used to account for, record, report and monitor project accounts. Separate financial records will be maintained for each financer by configuring the system and opening a separate cost center for each financer.
- 13. **Budgeting:** The PMU will maintain project budget and detailed disbursement plans, the annual budget will be developed based on an initial procurement plan and revised upon need and will be analyzed annually and semiannually as part of the IFR, justification for variances noted will be reported as well as part of the IFR.

- 14. **Financial Control:** The financial control function is covered by the MoF's Financial Controller based at PEA. According to the MoF's financial controller's mandate, all project activities implemented by line ministries need to be pre-verified and cleared by the financial controller based in that line ministry before being processed for payments. Therefore, the proposed project's related transactions will be subject to MoF's financial control pre-verification as well. The Financial Controller's function is important to insure that Project activities are in compliance with the Financial Procedures Manual and donors' guidelines as well as compliant with internal control mechanisms.
- 15. The proposed project's related transactions will follow strict financial procedures and internal controls to ensure that funds are used only for intended purposes and for financing eligible expenditures. The controls procedures include project payments will be: (i) reviewed and approved by the PEA technical team based in Gaza, i.e. they will certify all payment requests submitted by contractors/suppliers as a sign that payments are linked to activities that are in line with physical progress and for goods actually supplied and installed, (ii) reviewed by the PMU Procurement Specialist, Project Director and Financial team for approval; (iii) reviewed by the MoF Financial Controller; and (iv) each payment will be signed by two authorized signatories. All project FM procedures and internal controls will be included in the updated FM manual included in the Project Operational Manual.
- 16. A Manual of Procedures was prepared by the PMU as part of EUMP preparation which detailed the policies and procedures as well as internal controls followed by the PMU. The manual will be updated to reflect the procedures and controls proposed to monitor this project. Submitting final FM manual as part of the Project operational Manual will be a condition of effectiveness.
- 17. **Internal Audit**: The internal audit function is also centrally established at the MoF, with a mandate to cover all line ministries and public entities. MoF's internal audit function is in the process of becoming fully functional, and an internal audit manual has been drafted and training for the recruited internal auditor is underway. The Bank, as part of its overall support to the MoF from the financial management perspective, will continue discussions relating to further enhancing the internal audit function. The internal auditor will ensure that the processes and procedures are properly applied.
- 18. **Flow of Funds:** To ensure that funds are readily available, a US\$ Designated Account (DA) will be opened by the MoF under the central treasury system at the Bank of Palestine and will be operated and managed by the PEA through the PMU. Deposits into, and payments from the DA will be made in accordance with the provisions stated in the financing agreements and as outlined in the World Bank "Disbursements Guidelines for Projects".
- 19. Withdrawal Applications submitted to the Bank will be prepared by PMU and signed by the authorized signatures at the MoF before submission to the Bank for processing. Authorized signatories, names and corresponding specimens of their signatures will be submitted to the Bank prior to the receipt of the first replenishment application.

- 20. The PMU will have the sole responsibility of disbursing on behalf of the project to suppliers, contractors, consultants. No funds will be transferred to GEDCO. On a monthly basis, the PMU Finance department should reconcile the project bank accounts statement with client connection and with the PMU books of records to ensure that all receipts and payments are properly monitored. Reconciliations will be reviewed by the MoF Financial Controller. All reconciling items (if any) should be listed, explained and followed up on. Copies of the reconciliation together with the account bank statement should be kept in the project files.
- 21. Financial Reporting: The PMU will prepare semiannual Interim un-audited Financial Report (IFR). IFR shall be submitted to the Bank not later than 45 days after the end of the reporting period. IFR would be comprehensive and would cover all aspects of the project including all sources of financing and not only the portion related to the World Bank, and as part of the overall report separate reporting for each financier will be provided. The IFRs will be composed of: (i) Statement of Sources and Uses of Funds for the period and cumulatively by donor and by category; (ii) Uses of fund statement by project components for the period and cumulatively by donor along with explanations of significant variances between budgeted and actual amounts, and cash balances of the project; (iii) Statement of Designated Account reconciling period-opening and end balances; (iv) Statement of project commitments, i.e., the unpaid balances under the project's signed contracts, and in addition to the reports; and (v) a fixed assets/work in progress report indicating all relevant information (such as description, location, quantity, serial number), along with a Physical Progress Reports which include narrative information linking financial information with physical progress, and highlighting issues that require attention. The IFR would be comprehensive and would cover all aspects of the project including all sources of financing and would provide additional reporting for each financier separately. Draft IFR forms will be communicated and discussed with the Project team during negotiations.
- 22. **Auditing:** The project financial statements will be annually audited by a qualified independent auditor acceptable to the Bank in accordance with internationally accepted auditing standards and TOR acceptable to the Bank. The PMU in coordination with the MoF will be responsible for preparing the TORs for the auditor and submitting them to the Bank for clearance three months after the project's effectiveness. The external auditor shall be engaged not later than 7 months after project effectiveness. The audit report will be sent to the Bank not later than 6 months following the end of the project's fiscal year. The cost of the audit will be financed from the project.
- 23. The audit will be carried out in accordance with International Standards on Auditing and according to terms of reference (TORs) acceptable to the Bank. Audit will assess internal controls and report any deficiencies in the management letter. In addition to financial audit auditor is expected to perform technical audit on annual basis, in this context, auditors should use relevant technical specialists as needed to perform the technical audit in accordance to ToR acceptable to the Bank. Also the audit will assess the effectiveness of internal controls within the PMU.
- 24. In addition to the audit report, the external auditors will be expected to prepare a Management Letter giving observations and comments, and providing recommendations for

improvements in accounting records, systems, controls and compliance with financial covenants in the Bank Trust Fund Grant Agreement.

- 25. The audited annual project financial statements will be publicly disclosed according to the Bank's disclosure policy.
- 26. Annual Audited financial statement for GEDCO along with management letter will be required to be submitted to the Bank not later than 6 months after year end. GEDCO audited financial statement shall provide financial information on the donations received from the Bank as well as other financier under this project by activity i.e. goods, works, and assets. GEDCO financial statement along with management letter will be reviewed by the Bank.
- 27. **Training and Implementation Support:** The Bank will provide training to the PMU staff on Bank FM and disbursement guidelines and procedures and will provide FM implementation support during project supervision.
- 28. **Fixed Assets and Contracts Registers:** Fixed Assets Registers will be maintained project PMU, regularly updated and checked. Contracts Registers will also be maintained for all contracts.
- 29. **Supervision:** The Project FM arrangements and activities will be supervised bi-annually. The financial supervision activities will include, inter alia, review of IFRs, review of annual audited financial statements and management letters, technical audit reports, and GEDCO annual financial statement and management letter as well as timely follow up on issues raised by the auditor and review of SOEs if needed.

Disbursements

- 30. **Disbursement Arrangements:** Disbursements from the Bank's Grant will follow the transaction-based method, i.e. traditional Bank procedures: SOEs, Direct Payments, and Special Commitments. For certain payments, above the "Minimum Application Size" as specified in the Disbursement Letter, Withdrawal Applications (WAs) will be submitted to the Bank for payments to suppliers and consultants directly from the Grant Account.
- 31. Initially the DA Ceiling will be limited to USD 250,000 until the total amount disbursed and committed under the Grant shall reach USD 4,000,000; the Ceiling will then be increased to USD500,000. Subsequent disbursements into the DA will be based on SOE, and accompanied with Withdrawal Applications, reconciled bank statements and copies of all bank statements. The supporting documentation for requests for direct payment should be records evidencing eligible expenditures (copies of receipt, supplier's invoices).

Action Plan

Action	By when
Submit Final Project Operational Manual.	By effectiveness
Prepare project budget and detailed disbursement plans	By negotiations
Open separate DA	By Signing TFGA
Provide audit TORs for external Auditor for Bank's clearance	By 3 months from project effectiveness
Hiring acceptable financial auditor for the Project.	By 6 months after project effectiveness

Procurement

- 32. Procurement for the project shall be carried out in accordance with the World Bank "Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits and Grants" by World Bank Borrowers published by the World Bank in January 2011, for goods, works, non-consulting services, the World Bank "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" published by the World Bank in January 2011, for Consultants' Services, the accompanying standard bidding documents and the Grant Agreement. World Bank's "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and updated January 2011, shall apply to the Project.
- 33. Project procurement will be carried out by the PEA, through the PMU for the ongoing World Bank and donor-financed EUMP, which would act as the main counterpart to the Bank for all procurement aspects of the project. In particular, all procurement notices and advertisements and all contracts with suppliers, service providers and consultants will be issued by the PMU and signed by PEA Chairman. The PMU will ensure the involvement of GEDCO in all steps of the procurement process. The PMU will also be responsible for contract management including the review and approval of consultants' deliverables and the receipt/inspection and acceptance of goods and works, and for the release of payments to the consultant/supplier/service provider/contractor in accordance with the signed contract. PEA, through its Gaza-based staff will be responsible for direct coordination on contract execution and monitoring with GEDCO as well as reporting accordingly to the PMU. GEDCO will be responsible, in coordination with and support from PEA, for the design and preparation of the technical specifications of the project components. GEDCO shall be responsible for supervising the execution of the installation and civil works and for coordinating the consultants' and service providers' activities on a day-to-day basis, including the provision of agreed inputs/facilities.
- 34. A Procurement Capacity Assessment for the PEA- PMU was carried out as part of EUMP appraisal and updated during project preparation. The assessment evaluated the institutional capacity of the PMU to implement procurement under World Bank Procurement Guidelines and reviewed the organizational structure for implementing the project. Furthermore, the assessment evaluated procurement risks and made recommendations on mitigation measures for efficient procurement under the project.
- 35. The PMU operates under the umbrella of the PEA and is fully staffed with a director, procurement, financial management, accountant and other relevant staff. PMU procurement staff

has acquired substantial experience in implementing similar projects following the Bank's Procurement Guidelines and procurement performance for EUMP has been satisfactory. However, the coordination and the interaction of the PMU and GEDCO throughout project implementation may present a potential challenge that could delay project implementation. Further deterioration of the political circumstances and increased restrictions imposed on movement of people and goods into Gaza may delay or hinder the supply of goods/equipment necessary for the execution of the works and may impede the implementation of the technical assistance component. Information technology and systems are among the most challenging procurements given the diverse technical content, the rapid technological change and the complex service requirements, which require specialized expertise in defining the needs, preparing the technical design, managing the procurement process and supervising contract execution.

36. Following is a summary of the identified procurement risks and mitigation measures:

Procurement Risks:

- (i) Lack of proper coordination and interaction of the PMU, based in Ramallah, and GEDCO, located in Gaza, may cause procurement and project implementation delays
- (ii) GEDCO's limited knowledge of Bank Procurement Guidelines and limited project implementation capacity may delay project implementation
- (iii) Increased restrictions imposed on movement of people and goods into Gaza may delay or hinder the procurement and/or implementation of the works and technical assistance contracts.
- (iv) The PMU may be challenged by the procurement of IT systems, which requires specialized expertise.

Mitigation Measures: the following actions will be implemented:

- (i) The project implementation structure will be established and the detailed responsibilities of the PEA, PMU and GEDCO will be defined, as part of the Project Operational Manual (POM) to be prepared and approved by the Bank before Effectiveness.
- (ii) PEA staff operating in Gaza will be designated to follow up with GEDCO for the preparation of the technical designs and specifications, and for direct coordination of contract execution and monitoring, as well as reporting accordingly to the PMU.
- (iii) The PMU Manual of Procurement Procedures (PM), currently in use for EUMP, will be updated to detail the procedural requirements that the PMU and GEDCO would follow to handle procurement and contract management under the project. It is expected that a final PM will be approved by the Bank before Effectiveness

- (iv) Procurement and contract management training: training will be provided to PEA staff, based in Gaza and concerned staff of GEDCO, on the use of the PM in order to ensure that full capacity is in place. The training, which will take place immediately after effectiveness will focus on the project procurement arrangements and will provide a detailed explanation on the critical steps of the procurement and contract management process.
- (v) An international consulting firm, financed by the EC, is assigned the responsibility for assisting the PMU in the identification and development of the technical design and specifications, including the preparation of the bidding documents, for the IT hardware and software and for supervising contract execution.
- (vi) To ensure project readiness for implementation immediately after effectiveness, bill of quantities and technical specifications of the projects financed under Components shall be prepared by Negotiations.
- 37. The overall procurement risk rating for the project is **Substantial**.

Procurement Plan

38. A procurement plan (PP) for project implementation was prepared and agreed with the Bank during appraisal and summarized below. The PP specifies the procurement packages, estimated cost, methods and schedule, taking into consideration the project implementation schedule. The PP will be updated at least annually or as needed to reflect actual project implementation needs.

Summarized Procurement Plan

I. General

- 1. Project Name: Gaza Electricity Networks Rehabilitation Project
- **2. Period covered by this procurement plan**: first 18 months

II. Goods, Works and IT Systems

1. **Procurement Methods and Prior Review Thresholds**: Procurement Decisions subject to Prior Review by the Bank as stated in Appendix 1 to the Guidelines for Procurement:

Category	Method of Procurement	Threshold (US\$ Equivalent)	Prior Review Threshold (US\$ Equivalent)
Goods	ICB	No threshold	First contract and thereafter all contracts above \$1,000,000
	NCB	<500,000	First contract
	Shopping	<100,000	First contract
	Direct Contracting	No threshold	All contracts

Category	Method of Procurement	Threshold (US\$ Equivalent)	Prior Review Threshold (US\$ Equivalent)
Works	NCB	<2,000,000	First contract
	Shopping	<200,000	First contract
	Direct Contracting	No threshold	All contracts
	ICB	No threshold	First contract and thereafter
IT Systems			all contracts above
			\$1,000,000
	NCB	<500,000	First contract
	Shopping	<100,000	First contract
	Direct Contracting	No threshold	All contracts

2. <u>Summary of the Procurement Packages planned during the first 18 months after project effectiveness</u>

Goods:

1	2	3	4	5	6	7
Ref. No.	Description	Estimated Cost US\$ (,000)	Procurement Method	No. of lots	Domestic Preference (yes/no)	Review by Bank (Prior / Post)
1.	Supply of 34 km of 22 kV underground feeders from the North substation	1,352	ICB	1	No	Prior
2.	Supply of transformers, cables, poles, etc. for the rehabilitation of LV and MV networks	1,882	ICB	multiple	No	Prior
3.	Supply of mobile billing PCs	249	NCB	1	No	Prior
4.	Supply of utility Vehicles – Phase I	474	NCB	1	No	Post
5.	Supply of GIS (hardware and software)	319	NCB	2	No	Post
6.	Supply of load flow software	175	NCB	1	No	Post
7.	Supply of Utility Vehicles – Phase II	494	NCB	2	No	post
	Total	4,945				

Works:

1	2	3	4	5	6	7
Ref. No.	Description	Estimated Cost US\$ (,000)	Procurement Method	No. lots	Domestic Preference (yes/no)	Review by Bank (Prior / Post)
1.	Installation and civil works for 22 kV underground feeders from the North Subsation	497	NCB	multiple	No	Prior
2.	Installation and civil works for the rehabiltation of LV and MV networks	530	NCB	multiple	No	Post
	Total	1,027				

IT Systems:

1	2	3	4	5	6	7
Ref. No.	Description	Estimated Cost US\$ (,000)	Procurement Method	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Comments
1.	IT system to support integrated financial, accounting, administration management and customer services	1,483	ICB	No	Prior	Single- stage bidding
	Total	1,483				

III. Selection of Consultants

1. **Selection Methods and Prior Review Thresholds**: Selections subject to Prior Review by Bank as in Appendix 1 to the Guidelines Selection and Employment of Consultants:

Category Selection Threshold (US\$		Threshold (US\$	Prior Review Threshold (US\$ Equivalent)
Method Equivalent)		Equivalent)	
Consulting	QCBS/QBS	No threshold	First contract selected under each of the two methods and
Services Firms			thereafter all contracts above \$500,000
FBS/CQS/LCS <200,000 I		<200,000	First contract selected under each of the three methods

	Sole Source	No threshold	All contracts
Individuals	IC	No threshold	First contract and thereafter all contracts above \$200,000
	Sole Source	No threshold	All contracts

2. **Short list comprising entirely of national consultants:** Short list of consultants for services, estimated to cost less than \$300,000 equivalent per contract, may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

3. Consultancy Assignments with Selection Methods and Time Schedule

1	2	3	4	5	6
Ref. No.	Description of Assignment	Estimated Cost US\$ (,000)	Selection Method	Review by Bank (Prior / Post)	Comments
1.	Master plan for the development of the electricity sector in Gaza	515	QCBS	Prior	
2.	Financial Audit	31	LCS	Prior	
	Total	546			

Frequency of Procurement Supervision

39. The Bank's prior review thresholds were set based on the existing procurement capacity and the identified procurement risks. In addition to prior review, the Bank will carry out at least two supervision missions per year during which a close follow up and quality control of procurement /contract management matters will be maintained. A post procurement review of contracts which are not subject to the above prior review requirements shall be conducted once a year.

Procurement Records

40. Procurement post reviews should cover at least 20 percent of contracts subject to post review. Complete procurement documentation for each contract, including bidding documents, advertisements, bids received, bid evaluations, letters of acceptance, contract agreements, securities, related correspondence will be maintained by PEA-PMU in an orderly manner, readily available for audit.

Environmental and Social (including safeguards)

Social (including Safeguards)

41. Overall, the social development impacts of this project are expected to be positive. Some of the direct and indirect benefits include: (i) increasing access to electricity by expanding the electricity networks in Gaza; (ii) reducing physical dangers caused by old electrical networks;

- (iii) providing employment opportunities for engineers, technicians, and local contractors to work in the implementation of the project; (iv) enhancing citizen electricity system satisfaction with the services provided by GEDCO in the project areas and building of public trust in GEDCO; and (vii) contributing to increasing productivity of business, hospitals, schools and other services through reduced blackout periods due network outages.
- 42. Potential negative impact of the project are in general limited to the project construction phase and may include noise, dust, obstruction of access to business and houses, etc. These negatives impacts are manageable and their mitigation is addressed in the project Environmental and Social Management Plan (ESMP). The project will not require any land acquisition as the rehabilitation of the medium and low voltage networks will be carried out on existing facility sites and on public land and on municipality's city streets for the network expansion. Therefore, the projects financed under this Grant will not entail any resettlement or land acquisition and will not trigger the Involuntary Resettlement OP 4.12 safeguards policy.
- 43. A potential problem is the non-acceptance of the subcomponent related to prepaid meters, especially by the poor, because of the fear of being unable to pay for and, therefore, have access to electricity. To avoid this problem, consultations will be organized to discuss the piloting of the prepaid meters, which will not be targeting the poor in the first phase. In addition, GEDCO is working on developing a social assessment of the best way to pilot and implement the prepaid meter system, including taking into consideration access for the poor.
- 44. For Component 1, all works of subcomponent 1 will be done on existing lines (changing poles, adding transformers, etc.) which are routed on sidewalks in agreement with the municipality. Entrance to stores and other sources of livelihood will be made accessible for customers by providing walkways and construction will be done at night when necessary. Subcomponent 2 will consist of expansion of the MV and LV networks of which work on the median of streets, will not require any resettlement or obstruct any livelihoods. Component 2 will consist of technical assistance to enhance GEDCO capacity for operations and management and will not therefore require any resettlement or obstruct any livelihoods.
- 45. Consultation and Public Awareness: In each of the five governorates, a consultation meeting was held on the project with key stakeholders (affected peoples, women, youth, other relevant local NGOs, environmental institutions, government agencies and other stakeholders) to discuss the project (its positive and negative impacts, the pre-paid meter system, dispute resolution mechanism, etc.) and get feedback from the stakeholders on their concerns. Records of consultation were recorded in the disclosed ESIA. If there are any environmental and social concerns, mitigation measures will be explained to the public and, if deemed necessary, the ESMP will be modified.
- 46. In addition, GEDCO will have a communication campaign to help inform the public through: (1) making announcements on local radio stations in Gaza Strip; (2) preparing and distributing brochures to the public; (3) visiting people located near projects; (4) placing of banners in the streets in Gaza Strip announcing the project; and (5) providing information on the GEDCO's website (http://www.gedco.ps).

Dispute resolution and protection of the vulnerable

47. Disputes will be resolved by providing a written complaint to GEDCO. A meeting will be arranged with the person that submits the complaint to resolve the issue. If the issue cannot be resolved, an alternative method of completing the project will be identified. All complaints must be documented, including meetings and how the issues were resolved.

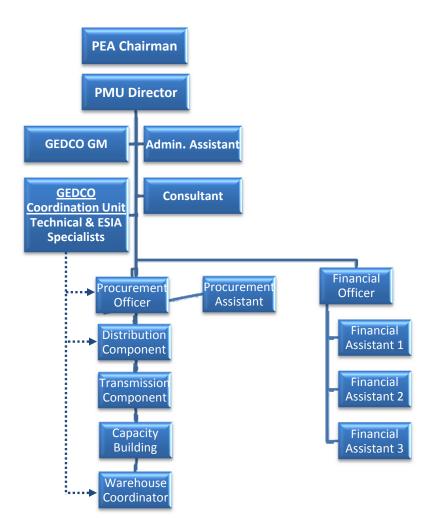
Environmental (including Safeguards)

- 48. The Project is expected to have positive environmental impacts. It will allow the target population to have improved supply of electricity that will result is a multitude of indirect positive environmental impacts. Component 1 aims for the rehabilitation of the electrical networks and network supply improvement respectively include the following actions:
 - Rehabilitation of deteriorated low and medium voltage networks in five governorates will mainly include replacing and installing wooden poles for low voltage and steel poles for medium voltage networks. This subcomponent will also include undertaking actions to increase aspects of human safety due to unsafe installations (moving exposed cables away from residences/replacing with safe, insulated ABC cables [aerial bunched cables], etc. The project design does not include replacing of transformers. Further, it is understood that PCB transformers have not been allowed in Gaza through the Israeli port since 1999.
 - **Network supply improvement:** From the West Substation of the Gaza Power Plant, three underground feeders will be constructed to load centers in Gaza city; and in an identified residential complex, new transformers will be installed along with medium and low voltage networks to reduce loading of existing networks and improve reliability of electricity supply to the residents. Additionally, the subcomponent will include the construction of underground feeders from the proposed North Substation to Gaza and North Governorates.
- 49. The project is classified as environmental category B and designed to ensure compliance with the requirements of the Environmental Assessment (OP 4.01) safeguard policy. An environmental and social impact review was undertaken by the World Bank during project preparation and noted that project activities could result in minor, temporary, site-specific and reversible adverse environmental impacts. The review also underscored the largely positive social impacts that will be generated through the project. The PEA and GEDCO prepared an ESIA and ESMP for the project that included mitigation measures for potential environmental impacts during construction and operation. The policy on Physical Cultural Resources (OP 4.11) will also not be triggered by the project activities due to the nature and location of the financed investment projects. This was verified during project preparation and confirmed by the ESMP. No other environmental policies are triggered as a result of project activities.

- 50. The PMU and GEDCO will monitor the implementation of the ESMP and report to the World Bank on its compliance during the project implementation. Since GEDCO will be responsible for implementation of the contracts/works financed under this project, the company will therefore report to the PMU on implementation of contracts (including compliance with ESMP). The PMU will in turn aggregate information and report to the Bank in the project progress reports on the implementation of the ESMP. A separate annex will be added to the progress reports on ESMP compliance, by sub-component. Relevant GEDCO staff was trained by the Bank on safeguard policies and requirements. Capacity building of these staff as well as of GEDCO's Environment Safety Unit will be continuously monitored and strengthened during implementation. This will help with both ensuring compliance with the ESMP and reporting of ESMP implementation in the progress reports.
- 51. A final ESMP was prepared by GEDCO, reviewed and found satisfactory by the World Bank and disclosed locally. The ESMP was also disclosed in the Bank's Infoshop on November 29, 2011.

Monitoring & Evaluation

52. The PMU will submit semi-annual project reports on the progress of all project components in a format to be agreed and finalized before Effectiveness. The project report will also include details on the key indicators most of which will be monitored on a semi-annual basis. These are presented in Annex 1 which includes baseline data and agreed targets for each of the future years. GEDCO will be responsible for providing the PMU with periodic updates on the implementation progress of the contracts execution and project implementation. GEDCO will also be responsible for monitoring the implementation of the project ESMP and reporting to the PMU on its compliance with the ESMP. The project reports will be submitted no later than 45 days of the reporting period. The PMU organizational structure including GEDCO is shown below:



Role of Partners

- 53. The IsDB will provide financing for the following two subcomponents in Component 1.
 - New 22 kV underground feeders from the Gaza Power Plant (US\$ 3,000,000): The project will construct three new 22 kV underground feeders from the Gaza Power Plant (GPP) to load centers in Gaza city. The feeders will be needed to support evacuation of additional electricity supply from GPP which will become available when the ongoing expansion of the GPP is completed. The total length of the feeders will about 36 km and will add a total of 36 MW of new network capacity.
 - Reconfiguration and Expansion of Medium and Low Voltage Networks (US\$ 4,410,000): The project will finance an expansion of the existing distribution networks in Gaza five governorates through the installation of medium and low voltage networks and transformers to reduce loading of existing networks, reduce losses and improve reliability of electricity supply. The project will include, among others, installing 24 km of new overhead networks, 10 km of new underground cables, and new distribution transformers.

54. The IsDB financing will be provided on a parallel basis. Implementation of the projects financed by the IsDB will be coordinated and agreed between the PEA and the IsDB. Supervision mission of the project components will be coordinated between the IsDB and World Bank. Progress reports prepared by the PEA will report on all the project components financed by both the World Bank and the IsDB.

Annex 4: Operational Risk Assessment Framework (ORAF)

West Bank and G: GZ-Gaza Electricity Network Rehab (P116199)

Stage: Board

1. Project Stakeholder Risks									
1.1 Stakeholder Risk	Rating	Moderate							
Description:	Risk Management:								
There may be vulnerable groups that are unable to afford electricity payments after the installation of pre-paid meters	The metering component of the project will first be implemented on a pilot basis to test effectiveness and impact and will not include installing such meters with vulnerable consumers.								
There may be fears by beneficiaries of disruption of business and access to houses due to construction of projects included under Component 1.		more, GEDCO will her impacts.	l be respon	sible for preparing a te	chnical and soci	ial assessment for the pi	lot metering p	roject addressing	
	Scaling up of installation of pre-paid meters in Gaza will take into consideration consumer affordability and learning from the experience of the pilot project and pre-paid metering installation in West Bank.						ing from the		
	Resp:	Client	Stage:	Implementation	Due Date:	30-Mar-2012	Status:	In Progress	
	Risk M	anagement:							
	disrupti	on during construc	tion. Durir		ntion measures v	ared before appraisal ad will be explained to the palkways.			
	Resp:	Client	Stage:	Implementation	Due Date:	31-Dec-2012	Status:	In Progress	
2. Implementing Agency (IA) Risks (including Fiduciary Risks)									
2.1 Capacity	Rating	High							
Description:	Risk M	anagement:							
Delays in project preparation and implementation may be caused by GEDCOs lack of capacity and knowledge of project management and Bank requirements. GEDCOs experience in working with Bank projects is limited and it has no knowledge of the procurement and financial management procedures.	respons GEDCO implem	ible for the procure O will be responsibe enting similar proj	ement, fina ble for civil ects in the	ncial management and and installation works	overall oversighthrough its tech Utility Capacity	ed EUMP along with oth nt responsibility of the in nical staff and local con y Building component o	mplementation stractors who h	a aspects of the project.	
·									
	ensure t	that implementatio	n is procee dvise GED	ding as scheduled. The CO on project activitie	Bank missions	on missions including vi will also include technic eview the need for addit	cal specialists	with experience in the	
	ensure t	that implementatio to supervise and ac PMU and GEDCO	n is procee dvise GED	ding as scheduled. The CO on project activitie	Bank missions	will also include technic	cal specialists	with experience in the	
	ensure t project by the F Resp:	that implementatio to supervise and ac PMU and GEDCO	n is proceed dvise GED during imp	ding as scheduled. The CO on project activitie plementation.	Bank missions s and will also re	will also include technic eview the need for addit	cal specialists tional support	with experience in the and training if required	
	ensure to project by the F Resp: Risk M Procure GEDCO	that implementation to supervise and acomment and GEDCO Bank Sanagement: Sement and financial control of the	n is proceed vise GED during imp Stage: I management counting ca	ding as scheduled. The CO on project activitie elementation. Implementation ent aspects will be han-	Bank missions s and will also re Due Date: dled by the PEA uired to provide	will also include technic eview the need for addit 30-Jun-2015 PMU. Technical assist annual financial audits	Status:	with experience in the and training if required In Progress rovided to enhance	

2.2 Governance	Rating	Moderate						
Description:	Risk Management:							
Lack of coordination between PEA and GEDCO in preparing the project components and their implementation.								
	Resp:	Client	Stage:	Implementation	Due Date:	30-Jun-2015	Status:	In Progress
3. Project Risks								
3.1 Design	Rating	Moderate						
Description:	Risk Ma	nagement:						
The scope of the project is limited to network reinforcement and does not include supply resources which may be perceived as not a priority delay project implementation after effectiveness. Furthermore, due to the significant scope of rehabilitation and expansion of the electricity networks and technical assistance, preparation of the final technical specifications and tender documents for the investments and technical assistance components financed by the project could take longer time than scheduled delaying therefore project implementation.	The project components were identified after a detailed review by the Bank based on assessments performed by the PEA and GEDCO and visits to project sites. The investment components proposed are of proven design and the project provides a streamlined approach focusing on financing conventional sub projects to improve network operations and expand their capacity in order to sustain operation of the networks under stressed conditions and support distributing additional electricity supply resources when they become available. To allow fast procurement and meet the implementation schedule, GEDCO has already prepared the bill of quantities for most of the investment projects under Component 1. PEA also agreed to use the services of an existing international consulting firm retained by PEA and whose contract is financed by the European Commission (EC) for the identification and development of the technical design and specifications including the preparation of the bidding documents for the above IT hardware and software subcomponents proposed for financing under Component 2.							
	Resp:	Client	Stage:	Implementation	Due Date:	30-Jun-2015	Status:	In Progress
3.2 Social and Environmental	Rating	Moderate			•			
Description:	Risk Management:							
Due to nature of the project being largely rehabilitation of existing facilities, the environmental and social impacts are expected to be minimal. However, the minor expansions may require social and environmental monitoring and GEDCO has no	The GEDCO will prepare an Environmental and Social Management Plan (ESMP) to mitigate the minimal environmental and social impact of the project. Furthermore, network expansion sub projects will be constructed on public and municipality owned lands and winot require land acquisition. Capacity building will also be provided to GEDCO for the supervision of the safeguards requirements							
experience with the Bank safeguards.	Resp:	Client	Stage:	Implementation	Due Date:	30-Jun-2015	Status:	In Progress
3.3 Program and Donor	Rating Moderate							
Description:	Risk Ma	nagement:						
While the cooperation with IsDB in financing the proposed Project could foster new cooperation between the Bank and IsDB in the rehabilitation of Gaza infrastructure, it could also impose a project implementation risk if financing arrangements lag or are inadequate.	The Bank and IsDB will be working together for the first time on an electricity project in West Bank and Gaza. Coordination so far h been adequate. Agreements have been reached that financing modality will be based on parallel financing. Nevertheless, IsDB financing will not be secured until the project is submitted for approval by IsDB management. Therefore, the project components will be designed such that the financing of the two institutions is not tied to the same subcomponents.							
	Resp:	Bank	Stage:	Implementation	Due Date:	01-Sep-2012	Status:	In Progress
3.4 Delivery Monitoring and Sustainability	Rating	Moderate						
	Risk Management:							
Description:	Risk Ma	magement:						
	The qual	ity of the project		nitored by the Bank, a EDCO for capacity bu		re it adheres to the requ	ired technical	standards. Technical
Description: Delivery of the project may be impacted by the use of less experienced GEDCO staff and	The qual	ity of the project				re it adheres to the requ 30-Jun-2015	Status:	standards. Technical In Progress
Description: Delivery of the project may be impacted by the use of less experienced GEDCO staff and	The qual	ity of the project e will also be pro	ovided to G	EDCO for capacity bu	ilding			
Description: Delivery of the project may be impacted by the use of less experienced GEDCO staff and local contractors.	The qual assistance Resp: Rating	ity of the project e will also be pro	ovided to G	EDCO for capacity bu	ilding			

		arrangements for the supply of equipment and materials for the repair of the electricity network in Gaza provided under the EUMPs Additional Financing. Procurement will be carried out by PEA and when movement restrictions are imposed, supplied materials will be delivered and stored in PEAs warehouses in West Bank. The PEA will then coordinate with the Israeli authorities and GEDCO on the transfer of the materials to Gaza. GEDCO will also be responsible for the civil and installation works utilizing its staff and local contractors to minimize impact on installation aspects once material delivery is fulfilled.						
	Resp: Client		Stage:	Implementation	Due Date:	30-Jun-2015	Status:	Not Yet Due
5. Overall Risk								
Preparation Risk Rating: Moderate		Im	plementati	tion Risk Rating:	High			
Description:		Des	scription:		•			
The project scope and design are simple and therefore its preparation risk is not material and has been rated moderate. Project preparation has gone smoothly with excellent cooperation from GEDCO and PEA			trictions are ssible rivalr itical and s EDCO as ne plonged per per projects plementation	re imposed by the GO ry between the Fatah security environment eeded. However, with riod. Moreover the na implemented in Wes on arrangements alrea	I on Gaza, project and Hamas factio could impact the a Bank office in ature of the project t Bank and Gaza dy in place. Whil	the complex political cat implementation will be not could also impact im ability of Bank staff to the Gaza, this is not expected allows for simple designation of the physical implementation of the physical implementa	e severely ham plementation. ravel to Gaza ed to have an a gn and the exp tanding of the ntation of the p	mpered. In addition, . Any disruption in the and provide support to adverse impact over a perience gained from e successful project is fairly

Annex 5: Implementation Support Plan

WEST BANK AND GAZA: Gaza Electricity Network Rehabilitation Project

Strategy and Approach for Implementation Support

- 1. The strategy for implementation support has been developed based on the nature of the Project which is financing mainstream network investments with low design and procurement risks but with high implementation risk due to the complex political context in Gaza, GEDCO capacity limitations and the restrictions imposed on Gaza which could severely hamper project implementation.
- 2. Therefore the Project will be implemented by the existing PMU at the PEA, which is currently handling the implementation of other Bank and donor financed projects including the Electric Utility Management Project (EUMP). The PMU operates under the umbrella of the PEA and is fully staffed with a director, procurement, financial management, accountant and other relevant technical staff. Key members of the PMU have performed well in implementing similar projects under the Bank's procurement guidelines, policies and procedures. While GEDCO will be responsible for civil and installation works through its technical staff and local contractors who have experience in implementing similar projects in the past. The Utility Capacity Building component of the project will also provide tools and IT systems to strengthen GEDCO's implementation and operational capacity.
- 3. Furthermore, during the first year of the project, the Bank will conduct regular supervision missions including visits to Gaza about once a quarter, to ensure that implementation is proceeding as scheduled. Missions will include technical specialists with relevant experience to supervise and advise GEDCO on project activities and will also assess if additional support and training is required by the PMU and GEDCO during implementation. World Bank missions during first year will also include environmental specialists to provide training for GEDCO on the Bank safeguards requirements for the supervision of the ESIA. Financial management training will also be provided to GEDCO by the World Bank during the first year of the project.

Implementation Support Plan

4. The main focus of the implementation support is summarized below and will be further reviewed and finalized during fiscal year budget planning. A mid-term review mission is also tentatively planned for April 2014.

Time	Focus	Resource Estimate	SW	Trip
Year 1	Project Supervision	Project Task Management	5	2
	Procurement	Procurement Specialist	4	0
	Financial Management	Financial Management Sp.	4	0
	Technical	Engineer and IT Specialist	6	4
	Environmental Training and Supervision	Environmental Specialist	3	2
	Social Supervision	Social Specialist	2	1
	Financial	Financial Analyst	2	1

Time	Focus	Resource Estimate	SW	Trip
Year 2	Project Supervision	Project Task Management	4	2
	Procurement	Procurement Specialist	3	0
	Financial Management	Financial Management Sp.	3	0
	Technical	Engineer and IT Specialist	4	3
	Environmental Training and Supervision	Environmental Specialist	2	1
	Social Supervision	Social Specialist	1	0
	Financial	Financial Analyst	2	1
Year 3	Project Supervision	Project Task Management	4	2
	Procurement	Procurement Specialist	3	0
	Financial Management	Financial Management Sp	3	0
	Technical	Engineer and IT Specialist	4	3
	Environmental Training and Supervision	Environmental Specialist	2	1
	Social Supervision	Social Specialist	1	0
	Financial	Financial Analyst	2	1

- 5. The procurement and financial management members of the team are based in the West Bank and Gaza country office and other members of the team could be from country offices in the region or headquarters staff.
- 6. The World Bank and the IsDB will also seek to carry out joint missions for project supervision. The IsDB supervision arrangements of its components would be agreed with PEA.