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Report No: 58218-CV

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF SDR {AMT} MILLION
(US$ 53.5 MILLION EQUIVALENT)

TO THE

REPUBLIC OF CAPE VERDE

FOR A

RECOVERY AND REFORM OF THE ELECTRICITY SECTOR PROJECT

November 11, 2011

Currency Equivalents

(Exchange Rate Effective as of June 27, 2011)

Currency Unit	=	Escudo
US$1.00	=	77.4 ECV

Weights and Measures

Metric System

Fiscal Year

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADP	Aguas de Portugal
ARE	*Agência de Regulação Económica* (Economic Regulation Agency)
CAS	Country Assistance Strategy
CO2	Carbon Dioxide
CPS	Country Partnership Strategy
CVE	Cape Verde Escudo
DGIE	*Direcção General da Energia (General Directorate of Energy of the Ministry of Tourism, Industry and Energy*)
EDP	*Electricidade de Portugal* (Power Utility of Portugal)
ELECTRA	*Empresa Publica de Electricidade e Água* (Public Company for Electricity and Water)
ESMF	Environmental and Social Management Framework
ESMP	Environmental ans Social Management Plan
EU	European Union
GoCV	Government of Cape Verde
HFO	Heavy Fuel Oil
ICB	International Competitive Bidding
IMF	International Monetary Fund
IPP	Independent power producer
INGRH	*Instituto Nacional de Gestão dos Recursos Hídricos* (National Water Resource Management Institute)
IRR	Internal Rate of Return
M&E	Monitoring and Evaluation
MECC	*Ministério de Economia, Crescimento e Competitividade* (Ministry of Economy, Growth and Competitiveness)
MIH	*Ministério das Infra-estruturas e Habitação* (Ministry of Infrastructure)
NPV	Net Present Value
PDO	Project Development Objectives
PEAS	*Projecto Energia, Água e Saneamento* (Energy, Water and Sanitation Project)
PPP	Public Private Partnership
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework

Vice President:	Obiageli K. Ezekwesili
Acting Country Director:	McDonald Benjamin
Sector Director:	Jamal Saghir
Sector Manager:	Lucio Monari
Task Team Leader:	Stephan Garnier

CAPE VERDE
Recovery and Reform of the Electricity Sector Project

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CAPE VERDE

RECOVERY AND REFORM OF THE ELECTRICITY SECTOR PROJECT

PROJECT APPRAISAL DOCUMENT

AFRICA

AFTEG

Basic Information

Date:	November 11, 2011	Sectors:	Power (80%); Water (5%); General energy sector (15%)
Country Director:	MacDonald Benjamin	Themes:	Infrastructure services for private sector development (P)
Sector Manager/Director:	Lucio Monari/Jamal Saghir	EA Category:	B (Partial Assessment)
Project ID: P115464			
Lending Instrument:	Specific Investment Loan		
Team Leader(s):	Stephan Garnier		

Does the project include any CDD component? No

Joint IFC: No

Borrower: Republic of Cape Verde

Responsible Agency: Ministry of Tourism, Industry and Energy (MTIE) ; ELECTRA S.A.R.L.

Contact:	Abraão Andrade Lopes Pedro Alcantara	Title:	General Manager of Energy PIU Coordinator
Telephone No.:	+238 992 41 64 +238 261 75 84	Email:	Abrao.Lopes@mtie.gov.cv Pedro.Alcantara@mtie.gov.cv

Project Implementation Period:	Start Date: March 2012	End Date: March 2016
Expected Effectiveness Date:	March 30, 2012	
Expected Closing Date:	September 30, 2016	

Project Financing Data(US$M)

[X] Loan	[ ] Grant	[ ] Other
[ ] Credit	[ ] Guarantee	

For Loans/Credits/Others

Total Project Cost :	58.5	Total Bank Financing :	53.5
Total Cofinancing :	5.0	Financing Gap :	0.0

Financing Source	Amount(US$M)
BORROWER/RECIPIENT	5.0
IBRD	53.5
IDA: New	
IDA: Recommitted	
Others	
Financing Gap	0.0
Total	58.5

Expected Disbursements (in USD Million)									
Fiscal Year	FY12	FY13	FY14	FY15	FY16	FY17			
Annual	1.0	15.0	18.0	15.0	3.5	1.0			
Cumulative		16.0	34.0	49.0	52.5	53.5			

Project Development Objective(s)

The proposed main development objectives of the Recovery and Reform of the Electricity Sector Project (RRESP) are to increase electricity generation in the Islands of Sao Vicente and Santiago and to assist ELECTRA to reduce electricity losses in Santiago Island.

Components

Component Name	Cost (USD Millions)
The proposed project, whose cost is estimated at US$58.5 million (of which US$53.5 million IBRD), comprises the following four components:	
Component 1. Priority Investments in Electricity and Water	42.5
a) Extension of Palmarejo Power Plant in Praia (Island of Santiago) including through the installation of two 10MW heavy fuel oil (HFO) fired generating unit(s) of electricity generation.	
b) Extension of Lazareto Power Plant in Mindelo (Island of Sao Vicente) including through the installation of one 5.5MW HFO fired generating unit(s) of electricity generation.	
c) Additional water storage capacity in Palmarejo including through the construction and installation of two water storage reservoirs and related interconnecting pipes at Palmarejo Power Plant.	
Component 2. Support ELECTRA's Loss Reduction Plan	6.0
a) Improve ELECTRA's ability to measure energy balances at different levels of electricity transmission and distribution chain including through the provision of metering equipment.	
b) Support for reducing electricity distribution losses by preventing meter and metering installation tampering including through the provision and installation of metering technology.	
c) Support to ensure proper management and optimization of the remote metering capabilities installed in the existing system through the design and implementation of an automatic metering management system.	
Component 3. Support ELECTRA's Reform and Sector Governance	1.5
a) Support activities related to electricity and water sectors' reform and reorganization of ELECTRA, including through the provision of technical assistance to complete the design and implement key reform steps in the electricity and water sectors.	
b) Support for monitoring the Performance Management Contract including through the provision of technical assistance.	
Component 4. Project implementation, communication and monitoring and evaluation	3.0
a) Support the PIU for effective implementation and supervision of the Project including through the provision of technical assistance, training, audits and design and carrying out of a communication campaign to disseminate ELECTRA's reform.	
b) Support ELECTRA for effective supervision of the Part A and B of the Project including through the provision of technical assistance	
PPA refinancing	0.5
Contingencies	5.0
TOTAL	**58.5**

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ]	No [X]
Does the project require any exceptions from Bank policies?	Yes [ ]	No [X]
Have these been approved by Bank management?	Yes [ ]	No [ ]
Is approval for any policy exception sought from the Board?	Yes [ ]	No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No [ ]

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04		X
Forests OP/BP 4.36		X
Pest Management OP 4.09		X

Physical Cultural Resources OP/BP 4.11		X
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12		X
Safety of Dams OP/BP 4.37		X
Projects on International Waters OP/BP 7.50		X
Projects in Disputed Areas OP/BP 7.60		X

Legal Covenants

Name	Recurrent	Due Date	Frequency
1.Reglatory review of electricity and water tariffs		Effectiveness	
Description of Condition**:** The Borrower has adopted and made public the ARE Resolution.			
2.Subsidiary Agreement		Effectiveness	
Description of Condition**:** The Subsidiary Loan Agreement has been executed on behalf of the Borrower and ELECTRA.			
3.Adoption of a Project Implementation Plan		Effectiveness	
Description of Condition**:** The Project Implementation Manual shall have been adopted by the Borrower in a manner satisfactory to the Bank.			
4. Recruitment by Electra of an Environmental and Social specialist		30 days after effectiveness	
Description of Covenant**:** The Borrower shall ensure that by no later than 30 days from the Effective Date, ELECTRA shall have hired an environmental and social specialist under terms of reference, qualifications and experience satisfactory to the Bank who shall be kept in the position throughout Project implementation.			
5. Recruitment of external financial auditor for the Project.		120 days after effectiveness	
Description of Covenant**:** The Borrower shall by no later than 120 days after the Effective Date, have appointed an external financial auditor for the Project under terms of reference and qualifications and experience satisfactory to the Bank.			
6. Project implementation unit	Recurrent		
Description of Covenant**:** The Borrower shall maintain the PIU within the DGE, throughout the implementation of the Project, with functions and resources satisfactory to the Bank.			
7. Annual work plan and budgets	Recurrent		
Description of Covenant**:** The Borrower shall prepare and adopt, not later than November 30 of each Fiscal Year during the implementation of the Project, or such later date as the Bank may agree, an annual work plan and budget ("Annual Work Plan and Budget"), in form and substance satisfactory to the Bank, containing a description of all activities (and associated budgeted costs) to be carried out in the following Fiscal Year, except that for the first year of implementation of the Project, it will cover the period from Effective Date through December 31 2012.			
8. Financial Management System	Recurrent		
Description of Covenant**:** The Borrower shall maintain a financial management system including records, accounts and preparation of related financial statements in accordance with accounting standards acceptable to the Bank.			
9.Project reports	Recurrent		Semesterly
Description of Covenant**:** The Borrower shall monitor and evaluate the progress of the Project and prepare Project Reports in form, content and substance satisfactory to the Bank; Report shall cover the period of one calendar quarter and shall be submitted to the Bank not letter than forty five (45) days after the end of the period covered by such report.			
10. Audited ELECTRA's Financial Statement Reports	Recurrent	6 months after the end of ELECTRA's fiscal year	Yearly
Description of Covenant**:** The Borrower shall submit to the Bank, audited ELECTRA's Financial Statements report and opinions, carried out in accordance with International Standards on Auditing (ISA), within six (6) months of the end of the Borrowers fiscal year.			
11. Project's Interim Financial Report	Recurrent		Quarterly
Description of Covenant**:** The Borrower shall prepare and submit to the Bank, a quarterly un-audited Interim Financial Report (IFR) of the project, in form and substance satisfactory to the Bank.			
12.Project's Annual Financial Statements	Recurrent		Annually
Description of Covenant**:** The Borrower shall prepare and submit to the Bank, Annual Financial Statements of the project, in form and substance satisfactory to the Bank, and submit the audited report and opinions, including the management letter, no letter than six (6) months after the end of the year.			
13. Financial covenant 1: Electricity tariff level adjustment	Recurrent		Every four months
Description of Covenant**:** The Borrower shall ensure that electricity tariff levels are adjusted every four (4) months in order to provide ELECTRA with the maximum allowed revenue set by the regulatory formula provided in the ARE Regulation or else compensate ELECTRA for any loss of revenue caused by insufficient or late tariff adjustments.			

14. Financial covenant 2: Interest Coverage Ratio	Recurrent		Annually
Description of Covenant**:** The Borrower shall, beginning in the second semester of 2013 and by no later than November 30 of each Fiscal Year thereafter inform the Bank the estimates of ELECTRA yearly financial results for the current Fiscal Year and the forecasted budget for the following Fiscal Year. Should such forecast indicate that ELECTRA would not achieve an interest coverage ratio (EBIT/Interest Costs) of at least 1.5 for the following Fiscal Year, the Borrower shall ensure that ELECTRA will achieve such interest coverage rate by taking the following measures: (i) deferring principal and interest repayments on the on-lent financial debt, and/or (ii) take alternative corrective measures to support ELECTRA and inform the Bank accordingly thereafter.			

Team Composition

Bank Staff

Name	Title	Specialization	Unit	UPI
Stephan Garnier	TTL, Sr. Energy Specialist	Power engineering/TTL	AFTEG	
Fabrice Bertholet	Sr. Financial Analyst	Financial Analysis/Regulation	AFTEG	
Philippe Durand	Program Coordinator	Advice/Quality Control	AFTEG	
Manuel Berlengiero	Energy Specialist	Energy Sector Reform	AFTEG	
Oumar Diallo	Sr. Water and Sanitation Specialist	Water aspects	ETWAF	
Pierre Boulanger	Sr. Water and Sanitation Specialist	Water aspects	ETWAF	
Amadou Konare	Sr. Environmental Specialist	Environmental safeguards	ASPEN (Cons.)	
Cheikh Sagna	Sr. Social Safeguards Specialist	Social safeguards	AFTCS	
Mansour Mbaye	Sr. Procurement Specialist	Procurement arrangements	AFTPC	
Osval Rocha	Sr. Financial Management Specialist	Financial management	AFTFM	
Noureddine Bouzaher	Consultant	Economic analysis	Consultant	
Luz Meza-Batrina	Senior Counsel	Legal aspects	LEGAF	
Wolfgang Chadab	Senior Finance Officer	Disbursement aspects	CTRFC	
Lu T. Ha	Sr Program Assistant		AFTEG	
Seynabou Thiaw Seye	Program Assistant		AFCF1	

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments

I. STRATEGIC CONTEXT

A. Country Context

1. Located in the Atlantic Ocean about 500 km off the coast of Senegal, Cape Verde is a small archipelago consisting of ten volcanic islands, nine of which are inhabited. Cape Verde has a total population of about 500,000, and in 2010 its GDP was US$1.65 billion. Aside from some modest fishing potential in its territorial waters Cape Verde has very limited natural resources. Its land area is small and not well suited for agriculture. Rainfall is both low and irregular, and only about 10 percent of the country's land area is arable. In addition, neither the islands nor their territorial waters are believed to contain any significant mineral resources, and all fuel products are imported. Cape Verde's fragmentary geography and dispersed population poses serious logistical challenges that prevent the formation of economies of agglomeration. Its abundant natural beauty, rich local culture and close proximity to Europe have made Cape Verde a popular tourist destination, and as a result, services have become the predominant economic sector. Nonetheless, as highlighted in Cape Verde's National Adaptation Program of Action (NAPA), the islands are exposed to increase climate vulnerabilities, and to maintain this comparative advantage in tourism, environmental concerns and natural resource management will need to be an integral part of its economic growth strategy.

2. Cape Verde has long enjoyed remarkable political stability. Since the adoption of a multiparty democratic system in 1991 power has changed hands regularly and peacefully. However, results from the parliamentary elections in February and presidential elections in August have created for the first time in Cape Verde a situation in which the majority in Parliament and the President come from opposing parties. While this situation might be considered testing for the country's political stability and governance system, it will not necessarily result in a deadlocked political situation, since Cape Verde constitution has established a parliamentary regime in which most of the executive responsibility lies with the Prime Minister representing the Parliamentary majority.

3. Good governance, political stability, sound economic management—including strong fiscal discipline and credible monetary and exchange-rate policies—trade openness and increasing integration into the global economy, the responsible use of donor support, and the adoption of effective social-sector strategies have produced impressive results throughout the Cape Verdean archipelago. The country boasted a remarkable average annual GDP growth rate of 6.0 percent from 2000 through 2010, with inflation averaging 2 percent and indebtedness declining until 2009. During this time per capita GDP grew from US$1,215 to US$3,323.

4. Poverty has fallen substantially over the past decade, with the poverty headcount rate dropping from 37 percent in 2002 to 26.7 percent in 2007 (latest available information). Meanwhile, health and education indicators have consistently improved: by 2007 Cape Verde had reached four of its eight Millennium Development Goals, and the remaining four are on track to be achieved before 2015. Cape Verde ranks 118th out of 169 countries in the 2010 Human Development Index.

Recent Economic Development

5. Cape Verde enjoyed an impressive average annual GDP growth rate of more than 7 percent from 2003-2007. However, the Cape Verdean economy is well integrated into the global economy, and its links to the Euro Zone are particularly strong. Consequently, the decline in the volume of international trade in services that accompanied the financial crisis has had a deeply negative effect. GDP growth declined to 6.2 percent in 2008 and to 3.6

percent in 2009. The government moved swiftly to address declining global demand for Cape Verdean exports and the contraction of international Loan markets through a countercyclical fiscal policy driven by a combination of tax cuts and increased public investment, which avoided a deeper slump in domestic economic activity. This strong fiscal response and the temporary rise in global demand led to a recovery in economic growth which rebounded to 5.4 percent in 2010 and is expected to remain steady at 5.6 percent in 2011.

6. As part of its response to the crisis, the Government of Cape Verde (GOCV) exploited the opportunity to tap into the buffers of fiscal space and external reserves that it had created in previous years and boost public investment, both to shore-up aggregate demand in the short-run, and at the same time addressing a number of binding infrastructure constraints on long-term growth. In this regard, the budget support provided by the Bank's PRSC series and by other development partners has enabled the government to adopt its countercyclical fiscal policy and continue its course of investment in critical infrastructure areas. New resources were directed to alleviating infrastructure bottlenecks though much-needed capital investment in power generation, ports, roads and air transportation. Meanwhile, tax rates on corporate and individual income were reduced in order to bolster private-sector investment and sustain household-level consumption.

7. Cape Verde currently ranks first in the Country Policy and Institutional Assessment (CPIA) for Low-Income Countries (LICs) in the Africa Region in 2010, and in recent years it has been routinely listed among the region's top performers in the Doing Business report. The Cape Verdean economy is largely focused on services, especially tourism and related activities such as construction and real estate. In 2007 Cape Verde achieved Middle-Income Country (MIC) status, and its formal recognition as a MIC is expected to be completed by the end of 2012 following a five-year transition period during which it still qualifies for concessional financing.

8. While the government's response to the global financial crisis has thus far proven effective, this fiscal stimulus has put increased pressure on the fiscal and external accounts. This, combined with the risk of the worsening of the Euro Zone crisis and with the cessation of concessional lending at the end of 2012, implies that the government will need to develop a new strategy to transition away from both its countercyclical policies and its access to concessional financing. The successful conclusion of the Growth and Poverty Reduction Strategy Paper – II (GPRSP-II) provides just such an opportunity, affording the government a chance to reassess its priorities and address the challenges of this dual transition through a renewed focus on its structural reform agenda. This agenda is expected to be reflected and further elaborated in the forthcoming GPRSP-III, which will cover the period from 2012-2015.

9. The PRSC VII will support the resumption of the government's structural reforms efforts at a time when the government is shifting its focus from macroeconomic management towards effecting further improvements in public-sector efficiency and overall good governance. In this context, the government's public investment program needs to be targeted toward the alleviation of binding infrastructure constraints, so as to stimulate private sector led growth and tax receipts. Also, restoring the financial viability of State owned enterprises (primarily ELECTRA the public electricity provider and TACV the national air carrier) is also critical to avoid the accumulation of contingent liabilities.

10. The World Bank is supporting this agenda of increased investment selectivity and improved SOE reform through two complementary lending instruments: budget support (PRSC VII) and an IBRD loan (the Recovery and Reform of the Electricity Sector Project - RRESP).

11. As part of prior actions for the PRSC VII, the Government completed the following measures in October 2011, toward the reform and recovery of Electra: (a) the adoption of the action plan for the second phase of its institutional restructuring; (b) the design of a comprehensive, realistic and time-bound approach to the financial reform of ELECTRA including recapitalization, the restructuring of short-term debt and the establishment of financing mechanisms for public lighting; (c) the adoption of a new regulatory tariff-adjustment model compatible with ELECTRA's institutional restructuring; and (d) the signature of a results-based management contract between ELECTRA and the General Directorate of the Treasury.

12. The investments and activities supported by the RRESP project will also contribute to the growth and fiscal consolidation agendas. The generation investments to be financed under the project will be located in the country's two main population centers where they will significantly expand electricity supply and make it more reliable. Electricity users in Cape Verde, including in the capital Praia, currently experience frequent power cuts, which are imposing significant costs to businesses. This expansion of generation will have a positive impact on the operating profitability of ELECTRA by (i) substituting to much costlier thermal generation, and (ii) allowing an expansion of supply which is clearly profitable with current electricity tariffs.

B. Sectoral and Institutional Context

13. Cape Verde's infrastructure and basic services are under pressure to meet the demands and opportunities of the rapidly growing economy and tourism. In this context, bringing ELECTRA to a point where it does not rely on government direct or indirect support to finance its activities would leave fiscal space for an increase in social services hitherto not available to a part of the population or not available at the required level or intensity, without endangering debt sustainability and growth objectives. Furthermore, a well-managed utility would not only provide better electricity and water services to existing consumers but would also extend these services to populations currently not served. These populations, generally the poorest, would not likely have electricity and water services any time soon, unless the utility is financially viable and able to finance the necessary infrastructure. This is why extending access to the poor can only realistically happen with a utility that stands on its feet and one that does not excessively, if at all, rely on government support.

14. Given the high growth of the economy and its growing sophistication, ELECTRA needs therefore to adapt to a new reality where it has to show higher efficiency, better services and client orientation, and adaptability to a fast changing operating environment. The constraints facing such a change that have to be addressed are: (a) the difficulty of managing and supplying numerous small and sparsely populated islands with isolated systems; (b) the financial disequilibrium of the utility induced by high and rising fuel costs and systemic issues such as high technical and commercial losses and fast growing demand from unbridled urbanization; (c) regulatory issues such tariff not reflecting actual costs in timely fashion; and (d) the persistent problem of arrears of municipalities for public lighting and other entities.

ELECTRA and the Power Sector in Cape Verde

15. ***ELECTRA's historical background***. The electric power subsector has been given special attention from the government ever since independence. The main goal of government policy for this subsector was the electrification of the main towns and villages of the country. At first, three regional companies were created to take care of generation and distribution of electricity and production and distribution of water in Praia (Santiago), Sao

Vicente and Sal. These three companies were later merged to form ELECTRA as a state owned public entity, whose objective was to extend access and improve the quality of supply of electricity and water in Cape Verde's ten 10 islands.

16. Following economic reforms brought about by the multiparty system introduced in 1991, ELECTRA was privatized in 1999/2000 and a majority of its stake sold to the Portuguese utility EDP, with shareholding as follows: EDP (51%), municipalities (15%) and Government of Cape Verde (34%). In spite of significant initial gains in efficiency and coverage under EDP management, privatization was marred by disagreements over the respective obligations of the parties, particularly regarding tariff adjustments, which were unavoidable given the increase in oil prices. In the absence of both preexisting agreements on tariff mechanisms and of a sector regulator, no satisfactory resolution of the disagreements could be found. Without the prospect of adjustment towards cost-recovering tariffs, EDP was no longer in a position to obtain appropriate return on significant investments it had already made, let alone mobilize financing for further investments on behalf of ELECTRA. In 2006 the government bought back EDP's shares and Electra reverted to public hands.

17. The government had pledged to reach 94% coverage of electrification in rural areas by 2011 and to increase the generation of electricity from renewable sources to 20% in 2011 and to 50% in 2020. The electrification goal has been achieved, as well as the goal of renewable energy penetration (see par. 15), but the cost of electricity remains high because of the dispersed and small size power stations and narrow markets.

18. ***Water management***. At a local level, water management falls under the responsibility of municipalities. The Law confers to the municipalities the obligation to supply fresh water to the communities under their jurisdiction. This obligation has been exercised by the Autonomous Service of Water and Sanitation and Municipal Enterprises created for that purpose with concession granted by the National Institute for Management of Water Resources (INGRH). In some cases the Municipalities delegate this responsibility further to the local communities. In main urban centers, like Praia, S. Vicente and Sal, ELECTRA was granted a concession to supply fresh water to the population.

19. ***Power generation and energy mix***. To date, Cape Verde has already developed the maximum renewable generation capacity that can technically be injected on its network to supply demand in the short to medium term. In particular, the GoCV and ELECTRA have entered into an agreement for the development as an IPP of a wind farm project of 26 MW in total (spread over 4 Islands: Santiago, Sao Vicente, Sal and Boa Vista). This project is now fully operative. Also, ELECTRA has started to benefit from generation from photovoltaic equipments (7.5 MW in total, in Praia and Mindelo) and the Portuguese cooperation is financing, mostly as a grant, 10 MW of solar generation (to be located in Praia and Sal). However, the contribution of wind will remain modest given the low average load factor observed (~15%) the first years due to the absorption capacity of the network (insufficient demand).

20. As of 31st December 2010, ELECTRA had in operation 18 diesel power stations of various capacity and three wind farms. The diesel power stations used in the generation of electric power burn Fuel Oil 380, Fuel Oil 180 and gasoil. Taking into consideration the difference in price of these fuels, the cost of generating electricity varies from station to station and from island to island. The total capacity installed is about 116MW, including 25 MW of wind power and 7.5 MW solar (i.e. 28 % from renewable energies). The energy generated in 2010 was 318.4 GWh. The peak demand recorded in 2010 was in Praia (Santiago) with 24 MW.

21. ***Investment needs***. The high growth of the electricity demand (6% per year on average, but nearly 15% in Praia) requires large investments in generation (doubling in less than 5 years in Praia) but also in transmission and distribution. Also because of lack of capacity, as well as lack of maintenance due to ELECTRA's financial difficulties, the quality of service remains poor with numerous loads shedding, especially in Praia (Santiago).

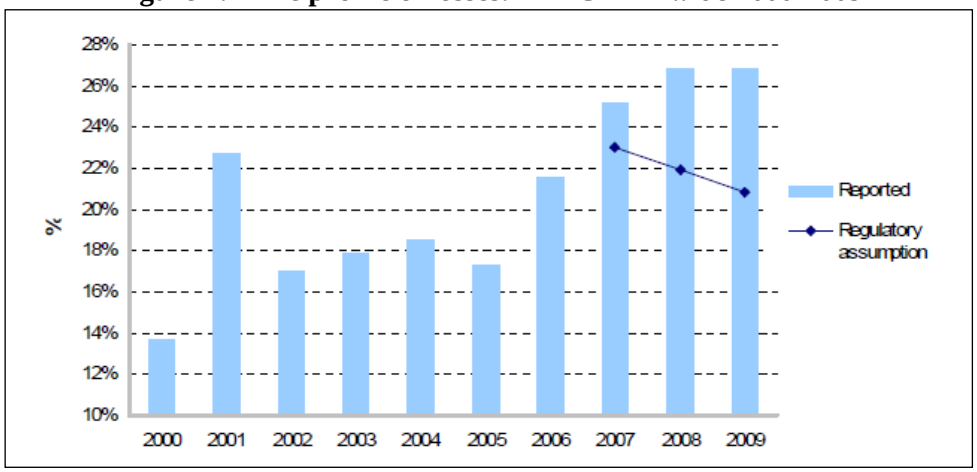
22. ***Electricity demand***. Taking into account the electricity used for water desalination and pumping (which is internal consumption because ELECTRA handles both electricity and water), the energy sold in 2010 was 204.4 GWh. The number of customers stood at 104,398 in 2009. The number more than doubled over the period 2000-2009 at an average annual rate of growth of 9%. With the exception of 125 medium voltage consumers, all consumers are low voltage consumers.

Table 1: Number of electricity customers 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Clients	47,149	54,485	60,724	65,538	71,243	77,228	82,800	88,169	94,461	104,398	115,562
% increase		15.6	11.5	7.9	8.0	8.4	7.2	6.5	7.1	10.5	10.7

23. ***Electricity losses***. Technical and non technical losses in transmission and distribution of electricity are high (with 27% in 2009), especially in Santiago island (i.e. in excess of 35% in Praia), compared to a reasonable 12-15%. This is currently the biggest issue affecting Electra's profitability since the regulator is considering an efficient level of losses for tariff setting that is significantly lower than actual losses. Furthermore, based on Electra's Annual Reports, the level of total losses has increased significantly over the current decade, coinciding with the departure of the private concessionaire (see figure 1 below).

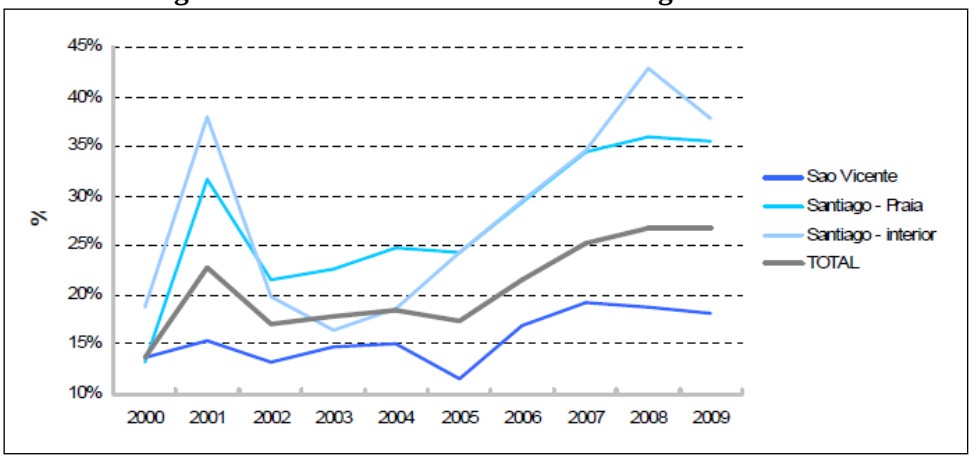
Figure 1: Time profile of losses: ELECTRA-wide 2000-2009



Mercados: ELECTRA – From recovery to Sustainability – Phase 1 – Final report

24. ***Large performance gap between the northern islands and southern islands***. The level of losses is much higher in Praia than in most islands and particularly than in Sao Vicente. In 2009, reported losses in Santiago – both in Praia and in the inland areas – were twice the levels reported in Sao Vicente, (see figure 2 below).

Figure 2: Losses: Sao Vicente and Santiago 2000-2009



Mercados: ELECTRA – From recovery to Sustainability – Phase 1 – Final report

25. ***Commercial practices and collection ratios.*** With the level of losses, bill collection management is the other critical aspect of Electra's business performance. The overall performance has averaged around 93% at the company-wide level over the past 5 years. Good performance would be no lower than 98%. Achieving this level of performance will require putting in place a sustainable mechanism regarding the financing of electricity bills for public lighting, which represent around 3% of total electricity billed, and which ELECTRA has for the most part not been able to recover from municipalities over the last 6 years.

Table 2: Collection ratios: 2005-2009 (% of amounts invoiced)

	2005	2006	2007	2008	2009	5 year average
Government	83,3	90,2	122,02	117,34	100,83	102,74
Municipalities	86,1	68,3	64,86	65,62	54,91	67,96
Domestic customers	88,4	87,0	93,85	91,24	94,70	91,04
Public companies	74,1	105,2	120,69	89,45	103,35	98,56
Private companies	101,5	91,5	103,51	97,06	97,26	98,17
AVERAGE	**91,3**	**88,2**	**98,09**	**93,55**	**94,28**	**93,08**

Mercados: ELECTRA – From recovery to Sustainability – Phase 1 – Final report

26. ***Supply of water.*** Water is scarce in Cape Verde and the main supply source of the population is the desalination of sea water (93%). Electra internal consumption of electricity for that purpose is therefore very high. Electra has taken actions to minimize the costs of desalinated water by changing to a more efficient desalination process (reverse osmosis (RO) and putting in place HFO fired power plants that use cheaper fuel that old units using gasoil. About 4.5 million m^3 of water were produced and 2.9 million m^3 were sold in 2009. Losses are therefore important (about 35.3%), especially in Santiago island (In 2009 losses in Praia were estimated at 44.5%). Important distribution investments are needed to reduce this high level of losses. The Government is currently working with the MCC to finance such a program.

27. There were about 40,000 customers in 2010. Demand is increasing at a rapid pace, especially with the development of tourism and important investments are needed in this area

as well. The average annual tariff is about US$4.5/m3 which is high compared to customer affordability, and the tariffs are regulated by ARE.

28. ***ELECTRA's financial situation:*** ELECTRA has accumulated losses over the last ten years. Operating losses reached a record level in 2006 and 2007 with operating losses averaging 30% of sales. ELECTRA's operating profitability improved significantly in 2008 when ELECTRA reached a positive level of EBITDA (operating income before depreciation), and more so in 2009. In 2010, ELECTRA maintained a positive level of EBITDA but experienced a decline in operating profitability compared to the previous year, mostly for two reasons: (i) higher oil prices and (ii) a strong increase in the level of provisions (constituted mostly by one-off charges resulting from the application of more rigorous accounting practices so as to clean up the balance sheet).

29. ELECTRA's operating profitability remains clearly negative with an operating loss representing 10.5% of revenue. The net loss for 2010 (after financial costs) represented 15.0% of revenues. ELECTRA's high level of operating losses is primarily related to poor commercial performance. This underperformance lies primarily in two areas: (i) the high level of distribution losses, above 26% in 2010 against a regulatory benchmark of 20% (which is expected to be reset at a higher level in the ongoing tariff review, although it is already higher than an efficient level) and (ii) a poor level of revenue collection, especially with some customer categories (municipalities for public lighting).

30. As a result of accumulated losses, ELECTRA is in a precarious balance sheet situation. At the end of 2010, the ratio of financial debt to equity was 8.3 reflecting an unsustainably high level of debt. In addition to its level, the structure of ELECTRA's debt was also unhealthy, with an excessive amount of short term debt (as reflected by a current ratio of 0.7).

31. ***Regulatory Challenge***: Historically, the absence of adequate tariff adjustment mechanisms has been a major obstacle to the financial sustainability of the power and water sectors. Disagreements over tariff adjustments were the major reason for the failure of the privatization of ELECTRA in 2006. Since ELECTRA reverted to public sector management, the Cape Verdean authorities have taken several steps to improve tariff-setting. Tariff regulation for electricity and water in Cape Verde is the responsibility of the Economic Regulatory Agency – ARE. As per sectoral legislation, tariffs are set under price-cap mechanisms, with tariff reviews taking place every 5 years.

32. Traditional price-cap mechanisms, originally developed for distribution utilities in developed countries, have often proven to be excessively rigid and inappropriate when applied to integrated power utilities in developing countries. Price cap mechanisms normally include periodic adjustments for fuel prices variations. However, the weight of the adjustment is usually based on an *ex ante* forecast of the generation mix. In this respect, experience in developing countries has demonstrated that it was very difficult for utility managers and regulators to forecast with reasonable accuracy the generation mix over a five year period. As a result of this unpredictability of the generation mix, a power utility regulated under a rigid price-cap formula can easily find itself in a situation where tariff revenues are durably below cost recovery levels.

33. To its credit, ARE has adopted a pragmatic approach when putting in place tariff regulation in Cape Verde. The first tariff review took place in 2008 and resulted in a transitional mechanism valid for a three-year period only so as to incorporate lessons learned in the next tariff review. Over the course of the application of the mechanism, ARE introduced further changes to it. In particular, ARE recognized that assumptions regarding

generation costs and generation mix had to be revised on an annual basis. In addition, ARE concluded that, given the volatility of oil prices, the frequency of tariff indexing had to be increased. As a result, tariffs are indexed every four months, concomitantly with the indexing of oil products prices. These regulatory decisions have resulted in revising upwards regulated maximum electricity prices.

34. Initially, the GoCV decided not to pass on the impact of higher fuel prices to consumers and to compensate Electra for the loss of revenues. However, in April 2011, the GoCV decided to apply fully the revised tariffs level as per the regulatory decision. This decision resulted in an average tariff increase close to 20% with electricity tariffs going from an average of 32 to 38 USc per kWh. This courageous step reflects the recognition that for structural reasons, electricity supply in a small thermal-based system in an Archipelago like Cape Verde is inherently costly and that those high costs need ultimately to be recovered from electricity users.

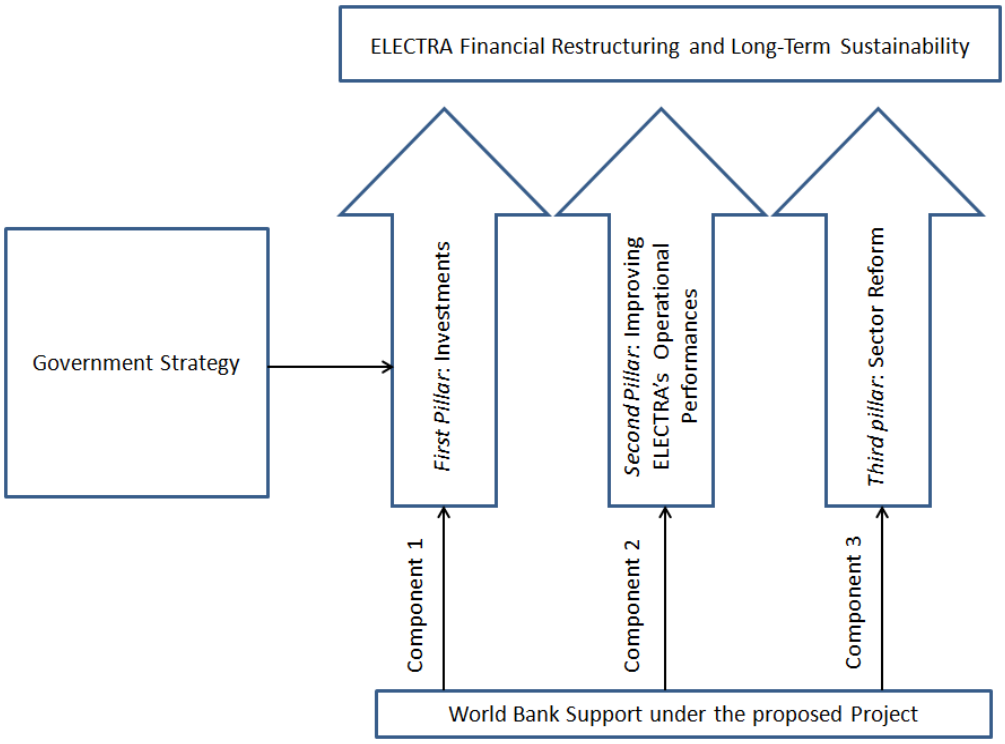
35. *New tariff mechanism*: As agreed with the Bank as a prior Action for PRSC VII, the principles and modalities of this new tariff regulation framework have been formalized in a technical decree which was officially approved by ARE in October 2011. The new framework is directly relevant for the ongoing tariff review which is in its final stages. ARE is expected to issue a proposal of tariff indexing formula for the 2012-2016 period by the end of November 2011. ARE will then conduct a public consultation, as required by sector legislation, before the final adoption of the proposal. The applicable tariff formula for the next five years will therefore be published at the earliest at the end of December 2011 or in early January 2012. There is no reason to expect that the application of this formula will result in a major adjustment compared to existing tariffs. The GoCV has indicated its commitment to the effective application of the new tariff formula in early 2012, which will be a condition of effectiveness of the project.

36. As per the new tariff framework, the expected cost reductions from more efficient generation and improved commercial performance over the next five years would be translated into tariff level adjustments only gradually and as they occur. In effect, the new framework, given the annual adjustments in the regulatory assumptions for the generation mix, should yield outcomes very similar to a mechanism of fuel cost pass-through. This approach should preserve ELECTRA's ability to generate a positive cash flow from operations even if new generation projects are delayed compared to schedule (a frequent problem in Sub Saharan Africa which has often not been dealt with satisfactorily by regulators). Also, the frequency of tariff indexing (every four months) appears adequate to protect ELECTRA from the financial impact of volatile oil prices. One can hope that the concomitance of electricity tariffs and oil prices adjustments (which in Cape Verde are also regulated by ARE) will make the electricity tariff adjustments more understandable for the population.

Government's strategy to address the issue of ELECTRA's lack of operational profitability

37. To address the significant shortcomings mentioned above, the Government has designed an overall strategy around three main pillars to steer the sector towards a sustainable path and ensure ELECTRA's financial and operational sustainability over the long run. The overall Government Strategy is presented in Figure 3. The Government has demonstrated strong commitment to this path as evidenced by key steps already taken (in particular under the PRSC VII) and as presented below for each pillar.

Figure 3: Government Strategy and World Bank support for the restructuring of ELECTRA and long term sustainability of the sector



38. ***First Pillar: Investment Plan***. The First Pillar includes a series of key investments over the next five years to allow a significant expansion of electricity and other infrastructure services, needed to achieve the sustained seven percent annual growth rate at the heart of the Government's economic transformation agenda. The GoCV has played a critical role in the mobilization of the financing required for the investments in expanded and more efficient power generation and interconnection of isolated centers. The identified investments will target first, electricity generation, to ensure that the fast growing electricity demand is properly met but also to reduce the cost of thermal generation of electricity through an improvement in the generation mix and better network integration. This will in particular involve switching from gasoil to heavy fuel oil (HFO). Also, once the required storage and logistical investments in the port of Praia are completed, switching from HFO 180 to the less costly HFO 380 for Santiago Island will bring about significant additional savings. Extending transmission lines to isolated loads in secondary centers, wherever possible, will increase the potential for fuel switching and allow ELECTRA to take advantage of economies of scale in the design and operation of a centralized power station. The goal is to have a sizeable power station per island, and therefore do away with small and inefficient power stations serving small load centers. This centralization will start with Palmarejo power station in Santiago Island and Lazaretto in Sao Vicente, in which the generation investments supported under this project, will be located. Taken together, the two power stations will supply nearly 2/3 of the Cape Verdean electricity market.

39. In addition to the reduction of thermal generation costs, recent investments in renewable generation (mostly wind but also solar PV) should bring some reduction in total generation costs and also diminish the exposure of the electricity sector to the variation of oil prices. However, wind and solar generation do not provide firm generation capacity and will not bring any reduction in capital expenditures for thermal generation. Also, the government is actively pursuing the promotion of demand side management, especially in the residential and tourism sectors.

40. Distribution investments will also be undertaken to target technical losses and improve the overall quality of service, ensuring that costumers reap the benefits of the upstream investments in the sector. Electricity and water sectors are closely linked in Cape Verde and a series of investment are also aimed at addressing this nexus, by improving efficiency and energy saving in the management of water desalination processes and by ensuring the development of water infrastructure to meet a growing demand.

41. In parallel, the GoCV intends to continue to pursue efforts to promote energy efficiency. With the support of the recently closed IDA financed Energy and Water Sector Reform Project, an energy efficiency strategy was prepared in 2004. The IDA project also supported activities to implement this strategy in particular the dissemination of efficient light bulbs. Also an application has been submitted to ESMAP Small Islands Program for a grant that would update the previously completed study and conduct: (i) an analysis of constraints and obstacles to the rational use of energy and (ii) the development of an action plan and implementation of short-term recommendations. The key objective of this study will be to define the main lines of a policy for managing energy consumption in the long term and support a strategy of systematization of energy efficient devices and equipments. GoCV is currently under discussion with the EU to fund the implementation of such strategy.

42. *Key Steps already taken by the Government*. Over the last three years, the Government has already completed 47% of the Investment Plan, equivalent to about US$186 million, showing strong commitment to address the investment shortcomings of the past. The already completed investments include the construction of four wind farms with a total installed capacity of 26 MW (of which 10 MW in Santiago, 8 MW in Sal, 6MW São Vincente and 2 MW in Boavista) through a public-private partnership (Cabeolica), the construction of four new power plants on the island of Santo Antão, Fogo, São Nicolau and Boavista, installation of four new units of 1.5 MW each in Santo Antão and Fogo and 1 MW in São Nicolau and Boavista, the financing and construction of 164 km of 20 KV transmission lines, of which 55 km in Santo Antão, 32 km in Fogo, 54 km in São Nicolau and 23 km Boavista (*see Annex 6 for further details on each investment already carried out, the source of financing and the alignment with the sector strategy*).

43. *Next steps and World Bank support*. Annex 6 presents the key investments identified by the Government to be realized between 2010 and 2016 and supported by several donors. The proposed plan includes a wide range of investments in the electricity generation, transmission, distribution and water infrastructure amounting to 393.61 million Euros, as shown in Table 4. About 50% of this amount has already been spent or committed and IBRD contribution accounts for about 10% of the overall amount with the expansion of the Palmarejo and Mindelo power plants and the additional water storage capacity in Palmarejo under Component 1.

Table 3: Investment Plan Summary

Year	Completed	Planned			TOTAL
		2012	2013	2014/2016	
	(in EUR million)				
Overall planned investments	186.07	34.29	68.526	118.92	393.61
Investment committed	206.54 (50%)				
World Bank support (Component 1)	42.5 (10%)				

44. ***Second Pillar: Improving ELECTRA's Operational Performances***. The second pillar in the Government strategy focuses on enhancing ELECTRA's operational performance, and therefore its financial position and operational sustainability. The

Government, supported by a consultancy firm, carried out a comprehensive analysis of Electra's capabilities to achieve a level of performance suitable to receive a credit rating from a reputable international agency, which would allow accessing commercial financing, or issuing bonds or a Public Offering for Electra's capital increase. As part of its assignment, the consultancy firm produced a Business Plan, a Financial Plan and an Action Plan to address ELECTRA's shortcomings. The assessment concluded that the company was in a critical condition but that there were enough reasons to believe that the implementation of a systematic, comprehensive, and aggressive plan would result in a complete change in Electra's performance leading to a sustainable and stable operational and financial position within 5 years.

45. The Action Plan was discussed and agreed upon with the Government, ELECTRA and other sector stakeholders in June 2011. This plan is aimed at achieving a systematic reduction in losses both technical and non-technical; improve collection and the overall quality of the service, as well as the financial fundamentals of the company. The Plan is the backbone for a successful restructuring of the sector and includes three actions: (i) strengthening of ELECTRA's Balance Sheet; (ii) enhancing ELECTRA's Short Term Viability; and (iii) consolidating Medium Term Performance. The Figure 4 below presents an overall summary of the Plan along these three levels. Annex 7 provides a more detailed overview of the Action Plan.

Figure 4: Outline of the Action Plan

Mercados: ELECTRA – From recovery to Sustainability – Phase 2 – Action Plan

46. The consultant studies (including a benchmarking analysis[1]) and the action plan have led to the establishment of target indicators and target values have been set. On this basis, a Performance Contract was developed and signed in October 2011 between the Government and ELECTRA. The agreement governs the relationship between the GoCV and ELECTRA. It clarifies the roles, responsibilities and obligations of the parties regarding the performance of the company and the support that the GoCV will provide to make possible the achievement of the operational and financial performance objectives (as measured by time bound indicators/targets). These indicators are realistic and based on the studies carried out by the consultant. The Government commitment is measured by its equity contribution to ELECTRA to provide it with enough funds to carry out the needed investment and loss reduction measures included in the Action Plan and achieve a break-even budget in 2015. Attachments 1 and 2 in Annex 7 present the targets for ELECTRA and financial commitment from the Government as included in the signed Performance Contract.

[1] Two different sets of utilities have been used for performing the benchmark:
- Utilities having similar physical characteristics to ELECTRA: utilities located in islands.
- Utilities having a similar size to ELECTRA: utilities with less than 250,000 customers

47. *Key Steps already taken by the Government.* In addition to signing the Performance Contract, the Government has developed a two-tier approach to steer ELECTRA towards a sustainable path based on short and medium term actions, as part of an existing program, aimed at improving ELECTRA's collection rates and addressing non-technical losses (MECOFIS).

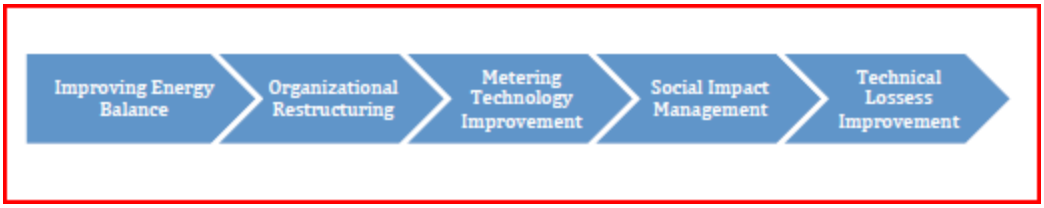
48. The short-term actions, which focused on improving collection rate and widening the means through which customers are allowed to settle electricity bills have now all been carried out. A joint ELECTRA and Government task-force identified the bottlenecks in the process and identified a series of measures that could be quickly implemented. These include the possibility for the consumer to pay ELECTRA's bill on-line at the web-site of the company, at the *Casa do Cidadão*, a one-stop shop for citizens and business services operating in Cape Verde, commercial bank's ATM's machines (more than 3,000 all over the country), POS payment system allowing ELECTRA's employees visiting consumers to receive immediate payment by credit card. Also, a communication campaign was carried out to increased awareness among citizens on how to settle ELECTRA's bills and to raise their awareness to the payment of their bill every month instead of the current payment cycle of about two or three months.

49. In addition, a large number of medium-term actions have been indentified and they are currently under implementation. These actions are targeted at specifically fighting non-technical losses and fraud which are the main objective of the MECOFIS program. The first set of actions includes the geo-referencing of costumers by cross checking ELECTRA's books and the result of the last census, under which each household had to declare whether they had electricity service from ELECTRA. Once the geo-referencing exercise is completed, the second set of actions includes the creation of Electricity Areas to monitor losses more accurately and pin-point potential sources of fraud. A series of distribution investments are also being carried out to ensure a better monitoring of energy flows for each Electricity Area (10,000 additional system meters were procured recently as part of this program). In addition, a private firm has been recruited, supported by local law enforcement agencies, to disconnect illegal customers and reconnect them without penalty after payment.

50. All these actions will complete the already ongoing program of actions such as: (i) investments in network improvement; (ii) use of prepayment meters (improving bill collection and demand-side management), introduction of efficient lighting devices (CFLs); (iii) toughening anti-theft laws and improving enforcement; (iv) expanding the MV network therefore making theft much more difficult; and (v) the installation of electronic meters for large consumers. Furthermore, the government is committed to a definitive solution to the persistent problem of non-payment of public lighting by the Municipalities through a legislative proposal to be submitted to Parliament in the next legislative session.

51. *Next steps and World Bank Support.* Annex 7 presents details on the key steps and concepts of the Action Plan, including longer term actions to be implemented to ensure a significant improvement of ELECTRA's commercial and operational performances and a sustainable future electric utility. These measures include an aggressive electricity loss reduction plan (see Figure 5 below), a water loss reduction plan, street lighting payment improvement, quality of service improvements and other long-term actions aimed at consolidating these improvements.

Figure 5: Losses Reduction Plan step-by-step



Mercados: ELECTRA – From recovery to Sustainability – Phase 2 – Action Plan

52. The proposed Project intends to support the second pillar of the Government strategy by financing a series of loss reduction activities aimed at enhancing ELECTRA's operational performance in the short and medium term. These actions will build on the efforts made by ELECTRA and the GoCV in reducing losses and include the activities considered as part of Component 2. In particular, the proposed project will provide about US$6 million to finance metering equipments aimed at improving the ELECTRA's ability to properly measure energy at different levels of the electricity transmission and distribution chain and improvement of metering technology for about 16,000 customers in Praia to reduce the risk of meter tampering. . The use of prepayment and spot metering should greatly enhance collection and improve cash flows as spot metering practically eliminates the gap that currently exists between the time the bill is issued and the time the payment is made (about 60 days). In addition, the proposed project will finance an external auditor to monitor the Government commitments and ELECTRA's performances to ensure that they adhere with the principles and targets outlined in the signed Performance Contract.

53. ***Third Pillar: Sector Reform***. The third pillar of the Government strategy consists in the reform of the overall electricity and water sector by restructuring and unbundling ELECTRA along geographical lines. The GoCV has decided to reorganize ELECTRA on a regional basis, which involves establishing two subsidiaries (North and South) and a holding company. Thanks to the creation of ELECTRA South, the Southern region will benefit from a dedicated management team, with a large autonomy, which will be accountable for commercial and financial performance. The main rationale for the reform is linked to the large and widening performance gap between the Northern islands, where ELECTRA management is located (in Mindelo, the second largest city in Cape Verde) and the Southern islands which represent more than half of the customer base. The Southern islands include in particular the island of Santiago and its capital Praia.

54. The level of electricity distribution losses in the Southern islands is more than twice as high as in the North and reflects widespread electricity theft. The absence of an effective management structure in position of responsibility and accountability in the South appears to have been a major contributing factor for the performance divergence within ELECTRA.

55. Some functions for which synergies are significant would remain centralized. The restructuring of ELECTRA would ultimately result into a new configuration for the electricity and water sectors in Cape Verde. The main actors of this restructuring would be:

- ELECTRA holding: This entity will determine the policy to be followed by its affiliates and may keep certain activities, such as investment planning, procurement, and HR;
- ELECTRA North: Generation and distribution of electricity in windward (or Barlovento) islands with full management autonomy. Contractual arrangement for billing and collection of water distribution to be defined during the reform process.

- ELECTRA South: Generation and distribution of electricity in leeward (or Sotavento) islands with full management autonomy. Contractual arrangement for billing and collection of water distribution to be defined during the reform process.

56. Over the long term, the water services and infrastructure will likely be managed by a new company, Aguas de Cabo Verde (ACV), to be established during the reform process.

57. The Government has opted for a restructuring of ELECTRA in two steps, each one constituted by three intermediate phases: Step 1 will focus on unbundling financial and accounting functions, while Step 2 will involve the decentralization of the management and organizational break-up of ELECTRA along sectoral lines. Annex 8 gives the details and timetable for the reform.

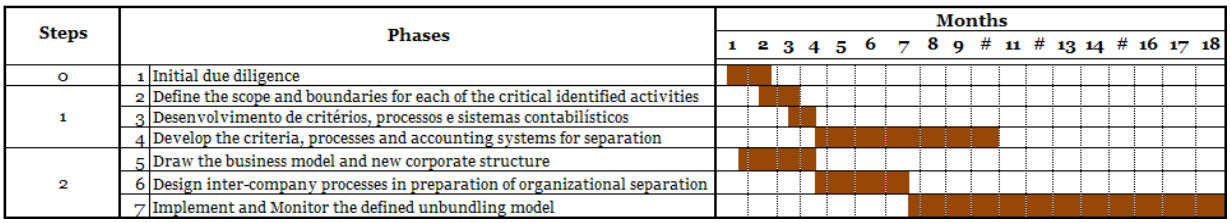
58. *Key Steps already taken by the Government*. Over the last year, the Government has already proceeded with the legal creation of the two operating companies, ELECTRA North and ELECTRA South. The General Managers and Board of the two ELECTRA subsidiaries have already been selected. A series of agreements between the two subsidiaries and ELECTRA holding company are being finalized consistent with the Performance Contract already signed between the Government and ELECTRA to make the two subsidiaries operational. These include sub-concession agreements, personnel sharing agreements, lease agreements for the operating assets of electricity and water production, contract for the provision of shared services, contract for the use of personnel, transfer of electricity and water distribution networks, etc. An international consultant has been recruited to assist the Government and ELECTRA in designing and implementing the steps to be taken to successfully complete the reform.

59. *Next steps and World Bank Support.* The consultant supporting the government has identified seven critical phases to implement the reform program over the next 18 months. After an initial due diligence phase (Phase 1), aimed at analyzing and understanding the current baseline situation, especially in terms of governance, operating model, accounting and information systems, each step of the reform will comprise three different key phases, as follow.

- Step 1: Unbundling financial and accounting functions
  - Phase 2: Define the scope and boundaries for each of the critical identified activities;
  - Phase 3: Develop the criteria, processes and accounting systems in order to prepare the accounting separation model and define the basis for implementation;
  - Phase 4: Define and monitor the implementation of the accounting unbundling model.
- Step 2: Decentralization of the management and organizational break-up of ELECTRA along sectoral lines
  - Phase 5: Draw the business model and new corporate structure;
  - Phase 6: Design inter-company processes in preparation of the organizational separation and set the groundwork for its implementation;
  - Phase 7: Implement and monitor the defined unbundling model.

60. The reform process will be carried out over the next 18 months and accordingly to the schedule shown in Figure 6 below.

Figure 6: Reform Schedule



Government of Cape Verde and ELECTRA Action Plan

61. The project will support the Government effort by financing the contract of the international consultant in charge of implementing the reform process. In this regard, the government has requested that this recruitment be considered as retroactive financing (financing of about 50% of the contract value has already been committed by the Government) and be reimbursed for the cost after project effectiveness. This will be acceptable since the recruitment has followed Bank guidelines.

62. **Financial restructuring**: The three pillars described above, when implemented, will result in a successful operational, organizational and institutional restructuring of ELECTRA and create favorable conditions to put the utility on financially sustainable path and to become a creditworthy entity able to borrow from the strength of its own balance sheet. However, over the next few years, ELECTRA still needs to be provided with adequate financial resources for investment and liquidity to be able to effectively implement the recovery plan. The GoCV has recognized this need to provide financial support to ELECTRA and formalized this support in a financial restructuring plan (whose preparation and adoption was also a prior action for PRSC VII).

63. *The modalities of the support provided to ELECTRA will be as follows*. **Firstly**, in the short term, ELECTRA will receive direct transfers from the budget to improve its liquidity position (the GoCV has committed in total to transfers of 9.2 MEuros -12.5 MUSD - in total for CY 2012 and 2013). **Secondly**, the GoCV will also support ELECTRA in the refinancing of its existing debt and credit lines. In particular, ELECTRA needs to refinance a 10 MEUROS bond repayment maturing in 2012. **Thirdly**, the GoCV has recognized the need to strengthen ELECTRA's equity. For this, it has been agreed that some of the investments for which the GoCV has mobilized financing on behalf of ELECTRA will be transferred to ELECTRA without on-lending of the corresponding debt (amounting to a recapitalization by transfer of assets). The investments concerned by such a transfer would be electricity generation and water desalination equipments (distribution assets are operated under a concession regime and remain under GoCV ownership) and amount to a total of 20.9 Meuros (28.2 MUSD).

64. Continued monitoring of the financial situation of ELECTRA during the implementation of the financial recovery plan will be critical. The project will support this process through the monitoring of ELECTRA's performance contract by an external expert and through financial covenants in the project's loan agreement.

C. Higher level Objectives to which the Project Contributes

65. Cape Verde's overarching vision is to achieve economic transformation based on its geo-strategic and natural assets, notably as a hub for transshipment, offshore financial and other services and tourism. These priorities are the foundation for its PRSP-I1 for 2008-11, which focuses on the following five pillars: public sector governance; human capital development; competitiveness; infrastructure; and social cohesion. Cape Verde has set ambitious goals to boost economic growth and reduce unemployment under the PRSP-I1

which may have to be revised taking into account the global financial crisis and the country's vulnerability to decreases in tourism, remittances and foreign direct investment.

66. The Bank's overarching objective for its Country Partnership Strategy (CPS) is to help the Government sustain high levels of growth and reduce unemployment, poverty and inequality. The Bank strategy aims to provide selective, demand-driven assistance that deepens the Cape Verde-Bank partnership in three key areas that constitute the pillars of the CPS: (1) promoting good governance and public sector capacity; (2) improving competitiveness and the investment climate for private sector led growth; and (3) strengthening human capital and social inclusion.

67. Moreover, in the same way as Cape Verde is pursuing a broader transformation agenda, the Bank aims to transform its relationship with Cape Verde over the period of the CPS (2009-2012). This involves a much broader menu of financial and technical support than in the past, to include IBRD lending; an expanded IFC program; MIGA and IBRD guarantees; new hedging products; and specialized technical assistance, for example on debt management.

68. The Bank has decided to concentrate its financial resources in selected areas within the three pillars of the CPS and allocate nearly the full IBRD envelope of **US$53.5 million** to the critical electricity and water to build on previous assistance to these sectors. The Bank's program continues to be coordinated closely with donor partners that are showing a growing interest in the electricity and water sectors such as AFD, JICA and AfDB.

69. The development objectives of the project are fully consistent with the first two pillars of the Country Partnership Strategy (CPS). By supporting improved electricity sector governance, and improved corporate governance and performance for ELECTRA, the project contributes directly to Pillar 1 (*promoting Good Governance and Public Sector Capacity*). Reduced generation costs and improved reliability of supply will contribute to Pillar 2 (*Improving Competitiveness and the Investment Climate for Private Sector-Led Growth*). With regard to the CPS second Pillar, a financially viable power sector will also facilitate private participation in the sector, which the GoCV wants to encourage on a project by project basis, as demonstrated by the recently developed wind power IPP. The project will directly contribute to several CPS outcomes. A successful financial restructuring plan for ELECTRA will help with CPS outcome 1.1 "reduced and better managed liabilities" the Progress Indicator of which is the clearance by ELCTRA of its arrears with suppliers. The project will contribute to outcome 2.2 "*Improved access to and quality of key economic infrastructure services*" which is broken down in several intermediate outcomes including "generation capacity increased" and "*Financial viability of ELECTRA restored*". The project is also fully aligned with the Foundation principle of the Africa Strategy (Governance and Public Sector Capacity). Expanded, more reliable and more efficient power supply will contribute directly to Pillar 1 of the Africa Strategy (*Competitiveness and Employment*).

D. Project Development Objectives:

70. ***The proposed objectives of the Project*** are to increase electricity generation in the Islands of Sao Vicente and Santiago and to assist ELECTRA to reduce electricity losses in Santiago Island.

71. ***Project Beneficiaries***. The direct project beneficiaries are ELECTRA's existing and prospective residential, commercial and industrial consumers who are connected to the network. The project more medium to long term beneficiaries are those who do not yet have access to electricity and whose prospects of having access are improved because ELECTRA would be in a better financial situation. Energy scarcity has been a major impediment to

attracting additional foreign direct investment in the country. The project should help ease this bottleneck.

E. Key results

72. In line with the very focus objectives of the project, the following key PDO indicators are proposed:

- **PDO Level Results Indicators**. *(See Annex 1 –for baselines and targets)*

- *PDO indicator 1:*	Electricity generated, net: (i) in Sao Vicente island and (ii) in Santiago island.
- *PDO indicator 2:*	Electricity system losses per year, total: in Santiago island;
- *PDO indicator 3:*	Direct Project Beneficiaries of which female (beneficiaries)

- **Intermediate results.** *(See Annex 1 –for baselines and targets)*

Increased generation capacity in the Island of Sao Vicente and Santiago

- *Intermediate result indicator 1: (Component 1)*	Additional generation capacity constructed under the project in Sao Vicente and Santiago islands.
- *Intermediate result indicator 2: (Component 1)*	Additional water storage capacity
- *Intermediate result indicator 3: (Component 1)*	Reduction in the variable costs of electricity generated (based on the 2011 petroleum products price levels)

Reduced losses in Praia, Santiago Island

- *Intermediate result indicator 1: (Component 2)*	Percentage of network metered (at the feeder level) in order to implement the loss reduction plan in Praia
- *Intermediate result indicator 2: (Component 2)*	Residential meters installed in Praia (of which prepaid)

Improved efficiency of ELECTRA and improved reliability of electricity

- *Intermediate result indicator 1: (Component 3)*	Overall energy losses (ELECTRA wide)
- *Intermediate result indicator 2: (Component 3)*	Electricity collection rate in Praia
- *Intermediate result indicator 3: (Component 3)*	Average Interruption Duration (AID) in Praia
- *Intermediate result indicator 4: (Component 3)*	Sector Financial and Performance Monitoring in Place

II. PROJECT DESCRIPTION

A. Project Components:

73. The proposed project, whose cost is estimated at about US$58.5 million (of which US$53.5 million IBRD), comprises the following four components:

Component 1. Priority investments in electricity and water (IBRD US$ 42.5 million) – (excluding 10% contingencies**)**

74. The investment component of the project will focus on priority investments that will allow ELECTRA to meet the electricity needs of a growing economy. The project proposes the financing of the following investments:

- ***Extension of Palmarejo Power Plant in Praia (Island of Santiago)*** including through the installation of two 10MW heavy fuel oil (HFO) fired generating unit(s) of electricity generation.

  The island of Santiago will require an additional 2 x 10MW Heavy Fuel Oil (HFO) fired generating unit(s) of electricity generation by 2013/2014 to satisfy the increasing daily max demand load of the island. The cost, to install 2 x 10MW of additional medium speed diesel engines at the Palmarejo power plant (PRAIA), has been estimated at about **US$30,000,000**.

- ***Extension of Lazareto Power Plant in Mindelo (Island of Sao Vicente)*** including through the installation of one 5.5MW HFO fired generating unit(s) of electricity generation

  On Saõ Vicente Island, additional capacity of 5.5MW Heavy Fuel Oil (HFO) fired generating unit(s) of electricity generation is also required by 2013/2014. A second 5.5 MW engine would be required preferably by 2015[2] at the latest. The proposed project will finance the main facilities for 2 x 5.5MW, but will finance only one engine. The cost to install 1 x 5.5MW at Lazareto power plant has been estimated at about **US$11,000,000** for 1x 5.5MW.

- ***Additional water storage capacity in Palmarejo*** including through the construction and installation of two water storage reservoirs and related interconnecting pipes at Palmarejo Power Plant Additional water storage capacity in Palmarejo (Praia)

  An additional 2 x 1500m^3 storage tanks are required at Palmarejo to satisfy the increasing demand for potable water on the island of Santiago. This extra storage capacity will also bring more flexibility to ELECTRA with regard to water production through desalination which is an electricity-intensive process and will contribute positively to the optimization of power generation by avoiding water production during the electricity demand peak hours and by maximizing wind power use. Furthermore having 2 x 1500m^3 will provide a sufficient buffer to ensure that during unscheduled power outages that there is enough stored supply of water to meet the island's needs. The estimated cost to fabricate 2 x 1500m^3 concrete tanks at Palmarejo, including interconnecting pipe work has been estimated at about **US$1,500,000**

[2] *The total cost has been estimated at about US$17,700,000 for 2x 5.5MW*

Component 2: Support ELECTRA's loss reduction plan (IBRD US$ 5.5 million and GoCV US$0.5 million) – (excluding 10% contingencies**)**

75. This proposed project component will finance a series of loss reduction activities aimed at enhancing ELECTRA's operational performance in the short term. These actions steam from a comprehensive analysis of ELECTRA's current capabilities and are part of a broader recovery action plan put together by the government. This recovery plan which has been prepared during project preparation was financed under a grant of the PPIAF's Sub-National Technical Assistance (SNTA). Based on the consultant action plan as presented in Annex 7, this component will focus on improving ELECTRA's short-term viability and therefore build the foundation for longer term operational and financial sustainability. Three subcomponents are envisaged as described below.

- ***Sub-component 2.1***: Improve ELECTRA's ability to measure energy balances at different levels of electricity transmission and distribution chain including through the provision of metering equipment.

  This subcomponent will finance metering equipments aimed at improving ELECTRA's ability to properly measure energy balances at different levels of the electricity transmission and distribution chain and therefore allow accurate energy flow control. Activities include installing metering equipment at the following levels: (i) MV feeders; (ii) MV/LV substations; (iii) large costumers; and (iv) related electronic management system and accessories. The estimated cost of this subcomponent is approximately: **US$2,300,000**

- ***Sub-component 2.2***: Support for reducing electricity distribution losses by preventing meter and metering installation tampering including through the provision and installation of metering technology.

  This sub-component will finance improvement of metering technology for about 16,000 customers in Praia currently below the MV/LV transformer level. This component is aimed at reducing losses by preventing meter and metering installation tampering. The estimated cost of this subcomponent is approximately: **US$3,200,000**

- ***Sub-component 2.3***: Support to ensure proper management and optimization of the remote metering capabilities installed in the existing system through the design and implementation of an automatic metering management system.

  This sub-component will finance the design and installation of an Automatic Metering Management System to ensure proper management and optimization of the remote metering capabilities installed in the existing system. The estimated cost of this subcomponent is approximately: **US$500,000**

A detailed description of each subcomponent is presented in Annex 2.

Component 3: Support to ELECTRA's Reform and Sector Governance (IBRD US$ 1.5 million)

76. Component 3 will support the Government effort to reform the electricity and water sector. In particular, it will:

- Support activities related to electricity sector reform and reorganization of ELECTRA, including through the provision of technical assistance to complete the design and implement key reform steps in the electricity and water sectors

The consultant has already been recruited under Advanced Financing and the Government has already committed about 30% of the contract amount to accelerate the reform process.

- Support for monitoring the Performance Management Contract including through the provision of technical assistance

  Under this component, the Government has also requested IBRD to finance the appointment of an independent auditor to monitor the Government commitment and ELECTRA's performance targets to ensure they reflect what has been agreed and signed as part of the Performance Contract (see Attachment 2 in Annex 7).

Component 4: Project implementation, communication and monitoring and evaluation (IBRD US$ 1.5 million and GoCV US$ 1.5 million)

77. This component will provide the Government and ELECTRA with the technical assistance and support required to implement and supervise the project. The PIU will be financed under GoCV funding: (around US$ 350.000 per year). In particular, it will include:

- Support the PIU for effective implementation and supervision of the Project including through the provision of technical assistance, training, audits and design and carrying out of a communication campaign to disseminate ELECTRA's reform.

  The project will finance a financial management project auditor, the design of a monitoring and evaluation system and a project monitoring and evaluation specialist, a communication specialist, as well as training and audits. The PIU will be financed under GoCV funding. (around US$ 350.000 per year).

- Support ELECTRA for effective supervision of the Part A and B of the Project including through the provision of technical assistance

  This will be done through the recruitment of an engineering consultant (Owners Engineer).

B. Project Financing:

1. Lending Instrument

78. The proposed lending instrument would be an IBRD Specific Investment Loan (SIL). Alternative instruments to this Loan were considered. These were: (i) an Adaptable Program Loan, which was not considered appropriate because the pace and extent of power sector reform is not yet sufficient to reasonably establish the scope of a longer-term, multi project program; (ii) a Learning and Innovation Loan, was not considered because of the need for capital investment to meet the sector's priority objectives; and (iii) a Sector Adjustment Loan was also not suitable because it would not address the specific investment needs of the power sector and also because the policy based lending for the energy sector is already included in the PRSC VII. The Sector Investment Loan was selected to enable the Government to continue progress in its sector reform agenda to build the foundations of a reliable electric power system capable of meeting the growing demand of services.

2. Project Cost and Financing

79. The RRESP cost is estimated at US$58.5 million to be financed by an IBRD loan of US$53.5 million and by the Government of Cape Verde for US$ 5.0 million. A summary of the project costs is provided below in Table 4.

Table 4: Project Cost and Financing (US$ Million)

Project Components	Project Cost	IBRD	GoCV	% of Financing
C1. Priority investments in electricity and water	42.5	42.5	-	72.6%
C2. Support ELECTRA's loss reduction plan	6.0	5.5	0.5	10.3%
C3. Support ELECTRA's Reform and Sector Governance	1.5	1.5	-	2.6%
C4. Project implementation, communication and monitoring and evaluation (*including PIU's financing*)	3.0	1.5	1.5	5.1%
Total Baseline Costs	***53.0***	***51.0***		***90.6%***
PPA refinancing	0.5	0.5		0.9%
Contingencies (10%) on C1 and C2	5.0	2.0	3.0	8.5%
Total Project Cost	***58.5***	***53.5***	***5.0***	***100%***
Total Financing Required	58.5	53.5	5.0	

80. Table below provides a detailed description of the project costs by category:

Table 5: Project costs by category

Category	Amount of the Grant Allocated (expressed in US$ million equivalent)	Percentage of expenditure to be financed (inclusive of Taxes)
(1) Goods	6.10	100%
(2) Works	42.50	100%
(3) Consultants' Services *(including audits)*	4.30	100%
(4) Training	0.10	100%
(5) PPA refinancing	0.50	100%
(6) Unallocated	5.00	100%
TOTAL AMOUNT	**58.50**	100%

C. Lessons Learned and Reflected in the Project design

81. Lessons learned from similar projects, including the recently closed Energy and Water Sector Reform Project, which are relevant to the proposed project include:

- *Project design should be tailored to local implementation capacity and institutional constraints*. Experiences from similar projects indicate that successful implementation is associated with a project design finely tuned to local institutional conditions and constraints. This project is designed in close collaboration with key energy sector institutions in the country with primacy

given to their business priorities. Given institutional weaknesses in terms of project design and implementation, the project focuses on a limited set of discrete, easily implementable actions tailored to the country's implementation capacity. This capacity is also taken into account in assigning roles and responsibilities in the implementation of the project and areas of capacity development have been identified for support. Physical investments have been kept as simple as possible while satisfying demand. Furthermore, the project put emphasis on complementing physical investments with managerial actions on the part of ELECTRA to improve performance, such as reducing technical and non-technical losses and improving billing and collection, all of which deprive the utility of much needed revenues. Accordingly, the physical components of the project are complemented by actions that should lead to improvement in the technical, managerial and financial situation of ELECTRA.

- *The importance of promoting ownership of activities and reforms*. The project relies on existing arrangements to implement the proposed project and does not create new institutional arrangements. The existing project implementation division of the Ministry of Tourism, Industry and Energy has a lot of experience overseeing the implementation of projects from various donors including AfDB, OPEC Fund, and IDA (e.g. the Energy and Water Sector Reform Project), while providing for strategic support through the financing of capacity development.

- *For power sector reform to succeed, it has to set realistic goals taking into account the investment climate, country risks, and ownership by the Government and other stakeholders.* The proposed project is designed based on the failed experience of the privatization of ELECTRA, the national electricity and water utility. A strong ownership of new reform goals was sought from the GoCV. This resulted into the preparation of an Electricity Sector Strategy and an action plan to carry out the necessary reforms in the sector. These documents were prepared based on a participatory approach involving all stakeholders to ensure a broader ownership of recommendations and proposed actions.

- *Environmental and social safeguards mitigation measures should be budgeted for in order for them to be effectively implemented*. Under the recently-closed Energy and Water Sector Reform Project, insufficient budgetary resources were allocated for safeguards activities, resulting in poor implementation. In the case of this project, resources are specifically budgeted to cover environmental and social mitigation measures identified in the two safeguard instruments prepared by the Borrower, namely the Environmental and Social Management Framework.

III. IMPLEMENTATION

A. Institutional and Implementation Arrangements

82. A **Project Implementation Unit (PIU**) was established in 1999 to implement an IDA and GEF-financed project (Energy and Water Sector Reform and Development Project). The PIU has satisfactorily carried out its fiduciary and management responsibilities during the implementation of this project. Upon project closing (on December 31st 2009), the GoCV decided to capitalize on the implementation capacity built within the PIU by integrating it

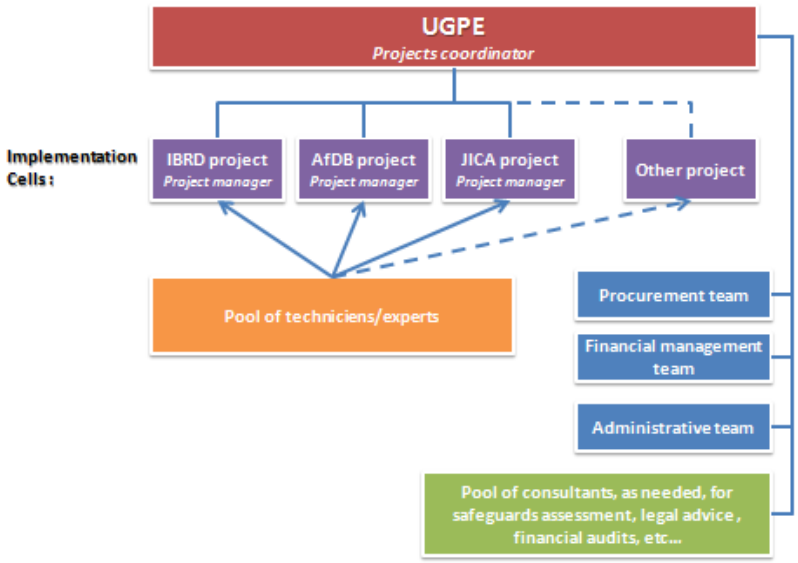
into the Directorate General for Energy (DGE) of the Ministry of Tourism, Industry and Energy. Under this institutional arrangement, the PIU, now called Unidade de Gestão de Projetos Especiais (UGPE), has been strengthened in terms of staffing, and is now entrusted with the responsibility of implementing projects from different donors. The PIU currently executes a project co-financed by the AfDB and JICA, and has been selected or is being considered for the implementation of other donor-financed projects including in the transportation sector.

83. The PIU will be responsible for implementing the IBRD project with full fiduciary responsibility. Its Financial Management capacity is adequate to meet the minimum requirements of the Bank. Having implemented a complex IDA-financed project, the PIU has a very thorough knowledge of Bank procurement rules and procedures, which would allow for a rapid and smooth implementation of the project. While the PIU will be the sole implementing entity, in operational terms, for the purpose of implementing Components 1 and 2, it will be supported by a dedicated team within ELECTRA, which itself will be supported by the services of a consulting engineering for the control and supervision of the works to be implemented during the project.

84. Within this framework, the PIU shall have responsibility for the day-to-day management of the Project and coordination of project-related activities, including overall responsibility for, *inter alia*: (i) ensuring timely implementation of the Project in accordance with the PIM; (ii) preparing Annual Work Plans and Budgets and annual Procurement Plans; (iii) overseeing Project activities under its direct responsibility and of project-related activities to be carried-out by other entities; (iv) managing Project finances; (v) maintaining consolidated Project accounts; (vi) ensuring adherence to the Safeguard Documents of all agencies involved in the implementation of the Project; (vii) developing and maintaining a system of monitoring the Project key performance indicators; (viii) ensuring coordination among agencies involved in Project implementation, as needed.

85. In order to carry out its responsibilities and effectively implement the various components of the project, the PIU will collaborate with several stakeholders and principally with ELECTRA, with the Ministry of Tourism, Industry and Energy, with the sector regulator ARE and with the Ministry of Finance.

Figure 7: Project Implementation Unit (or UGPE)



86. ELECTRA will be responsible for:

- Providing technical expertise for the preparation of bidding documents and for bid evaluation
- Monitoring the implementation of the investments under components 1 & 2 of the project. It will be assisted by an owner's engineer to be financed under the project.
- Providing data to the PIU for the monitoring and evaluation of results and outcomes of the project. For some of the indicators under the Performance Contract, it will collaborate with the independent auditor (also financed under the project), recruited to monitor the Performance Contract.
- The overall coordination of the project's environmental and social safeguards function. It will appoint a seasoned social and environmental specialist to ensure this task.
- Providing, within six (6) months of the end of its fiscal year, its audited Financial Statements report and auditor's opinion.

87. **Implementation period**: The RRESP is expected to be made effective by March 2012 and to close on September 30, 2016 – 54 months. As per the project procurement plan, physical investments will be rapidly executed (within about 24 to 30 months following effectiveness), while the other components notably those related to the restructuring of ELECTRA and improvement in sector's governance, will take a little bit longer. Table 6 below is summarized the implementation plan for the project's mail activities:

Table 6: Implementation plan for project's main activities

Component/ Main Activity	Contract award	Work completed
Component 1		
- Extension of the Palmarejo Power plant (Praia)	September 2012	September 2014
- Extension of Mindelo power plant on Sao Vicente Island (Mindelo)	September 2012	September 2014
- Additional water storage capacity in Palmarejo (Praia)	August 2012	December 2013
Component 2		
- Acquisition and installation of metering equipments to measure energy balances	July 2012	June 2013
- Acquisition and installation of 15,000 Split meters	July 2012	December 2013
- Design and installation of an Automatic Metering Management System	Aigust 2012	September 2013
Component 3		
- Technical Assistance to support the GoCV and ELECTRA in implementing ELECTRA's reform	November 2011	June 2014
- Technical Assistance to monitor and audit the performance contract signed between the GoCV and ELECTRA's board	Mai 2012	December 2015
Component 4		
- Engineering consultant for the control and supervision of the works	July 2012	September 2014
- Internal auditors	March 2012	December 2016

B. Results Monitoring and Evaluation

88. The monitoring and evaluation of results and outcomes will be the responsibility of PIU from data supplied by ELECTRA and government ministries and agencies. ELECTRA currently measures the electricity generated and distributed as well as revenues through its power flow and financial monitoring systems. ELECTRA will therefore monitor results of Components 1 and 2 through its existing monitoring and control systems and communicate the results to PIU. Given their encompassing nature, the results of components 3 will be monitored by several entities, including ELECTRA, ARE and the Ministry of Tourism, Industry and Energy. The project provides, under Component 4, for strengthening PIU to implement the project and monitor its results. Monitoring of results and outcomes will be reported in PIU's project implementation reports every 6 months. Furthermore, the Bank will supervise the project over its lifetime and its results and outcomes on a regular basis in order to monitor and evaluate the achievement of the project development objectives. Corrective actions, if necessary, will be discussed and agreed with the government.

89. In addition, the monitoring will also be ensured by the independent auditor (financed under the proposed project) and recruited to monitor the Government commitment and ELECTRA's performance targets agreed and signed as part of the Performance Contract.

C. Sustainability

90. The medium to long term outcome expected from the GoCV sector reform program is to transform ELECTRA into an operationally efficient and financially autonomous utility, which would be able to raise financing on the basis of the strength of its own balance sheet and prospects of cash flow generation. Also, the GoCV wants to encourage increased private sector participation in the sector. Given the failure of ELECTRA's privatization, private participation in the sector is being developed on a project by project basis, starting with power generation and water desalination. This involvement of the private sector could therefore take place within the newly created regional subsidiaries or alongside them. The government of Cape Verde is also adapting the regulatory framework to support and further the aims of the planned sector structure. A study of the suitability of the regulatory framework was carried out under PPF financing.

91. The Government is currently engaged in the implementation of policy measures and investment operations that would: (i) open up the electricity market; and (ii) rationalize energy pricing. Effective implementation of ELECTRA's recovery and reform plan is key to the sustainability of the project. The weak financial situation of ELECTRA is the major issue that needs to be addressed to ensure achievement of project outcomes. The application of cost reflective tariffs by the regulatory agency with an aggressive revenue collection by ELECTRA will improve financial performance of the utility. It will allow the GoCV to gradually reduce subsidies to the sector especially in view of the need, as pointed out earlier, to build large buffers for foreign reserves and fiscal space to enhance the economy's resilience against shocks and to finance social programs.

IV. KEY RISKS AND MITIGATION MEASURES

92. **Critical risks and possible controversial aspects.** Risks and mitigation measures that have been identified are described in the Operational risk Assessment Framework (ORAF) worksheet in Annex 4.

A. Risk Ratings summary

Stakeholder Risk	Moderate	Project Risk	Moderate
Operating Environment Risk			
- Country *Macro-economic risks*: External shocks related to the global economic downturn, and specifically the economic situation among key trading partners in Europe present a continuing downside risk. The fiscal space for a counter-cyclical response to further shocks is greatly constrained, while tightening monetary policies to defend the currency peg could harm the country's growth prospects. *Political risks*: Results from the parliamentary elections in February and presidential elections in August could test the country's governance system as this will be the first time that the Prime Minister and the President will originate from opposing parties.	Moderate	- Design The reform component may be complex to implement when set against the technical, financial and administrative capacities of the sector.	Low
- Sector and multi-sector Design and implementation of the reform may suffer because of lack of capacity at MTIE Regulatory Agency: unwillingness/incapacity of ARE to adjust tariffs may endanger the financial recovery of the sector.	Moderate	- Social and Environment Social and environmental safeguards may not receive the attention they deserve during implementation.	Moderate
Implementing agency risk	**Low**		
- Capacity PIU: Capacity of the PIU to implement all the projects in its portfolio. ELECTRA: Although technically capable, ELECTRA may not have the necessary skills to implement or monitor the implementation of component 1 of the project.	Low	- Program and Donor The investment program is mostly financed by donors; failure of some of the donors may have an impact on the sector recovery.	Low
- Governance	Low	- Delivery Monitoring and	Moderate

PIU: Changes in the management of the PIU, its structure or functioning, although not foreseen, may have a negative impact on the project.		Sustainability *Sector Reform*: There is no guarantee that ELECTRA decentralization will result in better services to consumers at lower cost or that the financial performance of the utility (taken globally) has improved. *Operational risk*: The deteriorating fiscal situation may make it more difficult for government to provide the required direct financial support for ELECTRA over the early years of the project, and hence increase operational risks. *Financial risks*. The project may not attain its PDOs because of the deterioration of ELECTRA's operational performance, especially because of an insufficient improvement in losses reduction, billing and collection.	
- Fraud and Corruption Risk of project funds being used for unauthorized purposes.	Low		
Overall Preparation Risk	Moderate	**Overall Implementation Risk**	Moderate

a. The overall implementation project risk is rated **Moderate**.

b. **Controversial aspects**: The preparatory work of the proposed project has not identified any controversial aspect. The need to adjust electricity tariffs to cost-reflective levels could have been considered as potentially controversial. However, following the significant tariff adjustment implemented in April this year (+20% on average), no further significant tariff increase is anticipated.

V. APPRAISAL SUMMARY

A. Economic and financial analyses

93. ***Component 1. Priority investments in electricity and water*** - *Electricity investment.* Given the importance of the power development in Cape Verde, it was ascertained that the purchase of the 2x10MW HFO fired diesel generators for the Palmarejo power station and a 1x5.5MW HFO fired diesel generator for the Lazareto power station remain, when compared to feasible alternatives, the least cost option for supplying unmet demand in Santiago and Sao Vicente Islands and more particularly in Praia and Mindelo, respectively. Current generation capacity in Cape Verde uses gasoil or a more expensive HFO as a fuel; the proposed switch to a cheaper heavy fuel oil would represent a significant cost saving. Under the assumptions shown in Annex 10, the diesel sets to be purchased for each island are the least cost means

for supplying the load. The NPV for each acquisition is positive and the rate of return is significant as shown in the following table (56% for Palmarejo and 42% for Lazareto). The switching values, or the values at which the NPV is reduced to zero, also show that the expected results of the project are robust and that the project is able to absorb important prospective shocks (see Annex 10 for details). The estimate of the average willingness to pay by consumers is based for 70% on current residential LV tariffs and for 30% on the avoided costs of self generation with small gensets using current gasoil prices in Cape Verde. As a result, the estimated willingness to pay is 45.1 USc/kWh (see Annex 10 for details). This willingness to pay does not fully capture the benefits that should accrue to consumers from more reliable power supply.

94. *Financial rates of return* on investments are normally lower than the economic return because a significant proportion of the economic benefit accrues to consumers (average tariffs being lower than the willingness to pay). Still, the justification for the proposed investment remains extremely robust when, for the purpose of the financial analysis of generation investments, the estimated average willingness to pay is replaced by the current average tariff (36.9 USc/kWh). The robust financial returns on the generation investments are related to the existence of a national uniform electricity tariff in Cape Verde, which implies embedded cross subsidies between Islands. In this context, expanding supply in the two most populated Islands with lower cost HFO based generation is highly financially profitable for ELECTRA, with FIRR of 38% and 28% for Palmarejo and Lazareto respectively. As an illustration, because of the large difference in generation costs between HFO and Diesel, the Palmarejo generation units would only need to run with an annual load factor of 16% in substitution to diesel units in order to provide a return on investment of 10% for ELECTRA. With regard to Lazareto, the project will finance a building designed to house two 5.5 MW generation units, but will only finance one generation unit because demand forecasts show that the second unit is likely to be needed only around 2016.

Table 7: Economic and Financial Net Present Values and Rates of Return

Power Station	Economic NPV (US$ million)	EIRR (%)	Financial NPV (US$ million)	FIRR (%)
Palmarejo	107	56%	61	38%
Lazareto	27	42%	14	28%

Table 8: Switching Values – Economic Analysis(*)

Parameters	Palmarejo	Lazareto
Capital cost overrun	340%	220%
Plant load factor (base case 57%)	14%	18%
Fuel price (base case 773 USD/ton)	1510 US$/ton	1400US$/ton

(*) If the selected parameters reach the values indicated, the NPV will equal zero.

95. *Water Storage Tank*. The objective of increasing the water storage capacity by adding a new storage of 3000m^3 is to increase the reliability of the water supply system in Praia and to collect desalinated water from the desalination units in a buffer tank before pumping it into Praia network. In addition, this extra storage capacity will bring more flexibility to

ELECTRA with regard to water production through desalination which is an electricity-intensive process and will contribute positively to the optimization of power generation by avoiding water production during the electricity demand peak hours.

96. A new network feeder with a pipe of 500 mm diameter and a new pumping station at Palmarejo water plant are currently being constructed. When the second desalination unit will be in operation, existing storage shall only be for 3 hours of production and there is no security of supply to consumers in case of major shut-down of the desalination plant because of a power failure, for example. The planned additional 3 000 m^3 storage should increase the capacity to store a total of 4 500 m^3 of treated water. This future storage capacity allows storing the water produced by one desalination unit during 21 hours or the water produced by four units during 5 hour.

97. ***Component 2: Improving ELECTRA Operational Performance***. Meters are an important tool both for demand management and revenue collection. The financial benefits for ELECTRA of improved billing and collection are extremely clear in the case of Santiago Island in which ELECTRA's commercial underperformance problems are concentrated (distribution losses above 35%). In addition to the expected benefits of reduced distribution losses, prepayment meters will also help improve collection rates. Restoring adequate metering and collection discipline is especially critical in the case of Cape Verde. Energy costs being very high, consumers must be incentivized to use energy efficiently.

98. ***Component 3. Support to Reform and Sector Governance***: When implemented, this component should directly contribute to the reduction of costs because of the increased efficiency in the choice of investments by ELECTRA and the pressure to reduce costs, improve system reliability and consumer responsiveness, exerted by the regulatory oversight of ARE. This component will also lay out the basis for a series of measures to enhance the sustainability of investments undertaken by ELECTRA and its ability to provide and expand services, especially through measures to enhance its financial sustainability, including a restructuring plan, tariffs and subsidies and the development of a strategy for commercial operations. The proposed project also addresses the issue of governance at the firm and sector levels which is paramount for accountability and good management of public sector assets.

99. ***Component 4. Project implementation and monitoring and evaluation***: This component will help in the smooth implementation of the project, including the financial, environmental and social safeguards.

Financial analysis summary

100. Cape Verde has made remarkable progress in expanding access to electricity. The number of connections has tripled in 10 years (1998-2008). However, increased access has not been accompanied by similar progress in terms of operating efficiency, or financial performance, on the part of ELECTRA. Over the last decade, the utility company has experienced financial losses year after year. Judged on the criteria of financial viability, technical and commercial performance, ELECTRA's performance is on a par with utility companies from IDA countries whose economic performance or governance is far inferior to that of Cape Verde. The project will support the GoCV's comprehensive recovery plan for ELECTRA so as to, over a time frame of about 5 years, bring the utility to a level of creditworthiness that will allow it to raise financing based on the strength of its own balance sheet and cash flow, which will be consistent with Cape Verde's newly acquired status of middle income country.

101. ELECTRA's recent financial history must be understood in the context of the aftermath of a failed privatization and of its return to the public sector. ELECTRA was privatized in 2000 when a consortium in which Electricity of Portugal (EDP) was the dominant partner acquired a majority of ELECTRA shares and took over the management of the utility. Initially, EDP helped ELECTRA raise funds through long term debt for a substantial investment program. The investments allowed an expansion of supply and helped bring about improvements in quality of service and efficiency. However, the privatization also coincided with a period of significant increase in oil prices. ELECTRA relies almost exclusively on oil products for power generation and cannot be profitable if it is not allowed to adjust tariffs when oil prices increase. However, the establishment of a tariff formula and the regulatory mechanisms for tariff-setting were not in place at the time of the privatization transaction. Tariffs adjustments became a major issue of contention between the authorities and EDP. In addition, ELECTRA was experiencing difficulties with bill collection from public sector entities.

102. In the absence of tariff allowing cost recovery, ELECTRA's investments were reduced to the minimum after 2003. Beginning in 2006, the main indicators of company operational performance started to deteriorate significantly. Eventually, EDP ceded back its majority participation in ELECTRA to the GoCV. In 2007 and 2008, after ELECTRA's reversion to the public sector, its operational performance continued to worsen. In particular, electricity distribution losses increased, mostly because of electricity theft and fraud, up to a level of 26.8% in 2008 against 17.3% just three years earlier. Distribution losses have remained stable at this high level from 2008 to 2011as efforts put in place to combat electricity theft have at least stopped the rapid spread of this phenomenon that had been observed in the three preceding years.

103. Due to the combination of poor performance and inadequate tariffs, ELECTRA was not even able to cover its current operating costs in 2006 and 2007 (negative "Earning Before Interests Depreciation and Amortization" - EBITDA). With the implementation of a new tariff regime in 2008, ELECTRA improved its operating performance and managed to achieve a positive level of EBITDA. However, ELECTRA's Operating Income has remained in the red from 2008 to 2010. ELECTRA's equity position has remained positive only thanks to a series of small recapitalization.

104. Beginning in 2009, ELECTRA has started to improve generation efficiency thanks to additional generation running on HFO instead of gasoil. The commissioning of renewable generation plants in 2011 (Wind and to a small extent solar) has further reduced operating costs. ELCTRA's investment plan is expected to bring about further fuel switching from gasoil to Heavy Fuel Oil (HFO). It is expected that in four years, only the smallest islands representing less than 5% of electricity demand will be supplied with gasoil based generation. In Santiago Island, the interconnection of all the localities supplied by ELECTRA will make possible a centralization of power generation in the Palmarejo power station located outside Praia (including the additional capacity financed under this project). This will replace generation from five small thermal generation sites that are very costly to operate. The impact of fuel switching on operating costs is significant. At current oil prices, fuel costs with HFO 180 in Praia are 19 USc/kWh against 30USc/kWh in the other plants of the Island running on gasoil. In the future, additional savings (above 10%) will materialize by switching Palmarejo power station to HFO 380 which is already the case for Lazareto (given the uncertainty over the timing of the switch, this saving has not been taken into account in the financial forecasts).

105. ELECTRA's financial prospect: The GoCV has clearly put in place the key elements for a comprehensive sector recovery, by mobilizing the resource for a large investment program, by increasing electricity tariffs and putting in place adequate tariff adjustment mechanisms, and supporting the efforts to improve commercial performance. With adequate GoCV political and financial support, it would not appear unrealistic to aim for a reduction of distribution losses to a level below 15% (against more than 26% today)[3]. A systematic campaign to regularize illegal connections in Santiago Island where losses are currently close to 35% could therefore bring significant gains. On this basis, the GoCV has recently concluded a performance contract with ELECTRA's board of director in which the board is committed to a reduction of losses to 19% by 2013 and 13% by 2015.

106. 2012-2017 financial forecasts under "ELECTRA's" scenario: The financial forecasts prepared on the basis of the Performance Contract are presented in annex 9. Under this scenario, which assumes that electricity tariffs and oil prices would remain at their current level throughout the forecasting period (a reasonable assumption since fuel costs are a quasi pass through under tariff regulation mechanisms), ELECTRA would see its operating profitability increase significantly. This would, over time, improve ELECTRA's financial structure, with indicators for liquidity (current ratio), leverage (Debt to Equity) and debt service coverage becoming conformed to what could be expected from a financially autonomous utility company from 2015 onwards.

107. An alternative "conservative" forecasting scenario highlights the need for additional financial support to ELECTRA: While not out of reach, the performance targets under the performance contract appear very aggressive. The World Bank team has prepared an alternative forecasting scenario which would entail a slower pace of distribution loss reduction (*22% instead of 19% in 2013, 18.3% against 13% in 2015*). In addition, this "conservative" scenario takes into account higher expected losses from unrecoverable revenue. Under this scenario, the improvement in operating profitability would be slower and by itself insufficient to improve sufficiently ELECTRA's balance sheet situation.

108. The GoCV has already recognized that ELECTRA would need financial support during the implementation of the recovery plan. As previously mentioned, this support will take the form of (i) mobilization by the GoCV on behalf of the utility of the financing for a comprehensive investment program, (ii) measures securing bill payments from municipalities (new legislation introduced in parliament) and (iii) supporting ELECTRA in the refinancing of its existing long term financial debt (in particular with two local bond tranches whose repayment are due respectively in 2012 and 2017). In addition, given the financial risks highlighted in the conservative forecasting scenario, the GoCV has also agreed to (iv) provide liquidity support to ELECTRA in 2012 and 2013 for a total 9.5 M Euros (commitment recorded in the Performance contract), and (v) recapitalize ELECTRA in 2012 by an amount of 20.9 M Euros (US$ 28.2) through the transfer of ownership of power generation and water desalination equipment without transfer of the corresponding debt. With the five elements listed above, one can consider that the GoCV has provided the key elements of a comprehensive restructuring plan as agreed as part of the PRSC VII ("*design of a comprehensive, realistic and time-bound approach to the financial reform of ELECTRA including recapitalization, the restructuring of short-term debt and the establishment of financing mechanisms for public lighting*").

109. With this additional financial support, ELECTRA would have the resources to implement its recovery plan in 2012 and 2013. Beyond this horizon, the conservative

[3] ELECTRA as a whole was in fact close to this level of performance in 2005. Distribution losses for the Northern Islands are already below this level.

forecasting scenario indicates that financial indicators for liquidity and interest coverage would remain stretched at least until 2016. It would therefore be critical to put in place mechanisms to adjust course when necessary to ensure that ELECTRA's financial recovery remains on track. This mechanism, starting after the first 18-24 months of implementation of the recovery plan, would consist in an annual review which would assess (i) the progress towards the objectives of the contractual plan (based on an independent expert report supported under the project), and (ii) the progress towards financial recovery of ELECTRA as measured by estimates for financial indicators for the current year, and by forecasts the following year.

110. As planned under the performance contract monitoring arrangements, the annual assessment of progress towards operational recovery would provide an objective basis for the dialogue between the GoCV and the Directors appointed to manage ELECTRA. The financial assessment would be used to decide if ELECTRA is in need of additional support, which could take different forms. In particular, ELECTRA's level of financial debt will increase significantly with the implementation of the Investment program which is part of the recovery plan, the bulk of this additional debt being on-lent by the GoCV. The GoCV should be prepared to adjust ELECTRA debt service obligations (capital repayment schedule, interest rate) to make sure that they remain compatible with ELECTRA's financial recovery. By a dated covenant under the loan agreement, the GoCV would commit from 2013 onwards, to (i) deferring principal and interest repayments on the on-lent financial debt when a realistic budget forecast for the following year indicates that ELECTRA Group (consolidation of ELECTRA Sarl, North and South) will not achieve an interest coverage ratio (EBIT/interest costs) of at least 1.5, and/or (ii) alternative and at least equivalent measures to support ELECTRA.

B. Technical

111. The technical design of the project is considered sound. The physical components of the project are based on feasibility studies which have been approved by the Government and reviewed by the Bank team to meet generally accepted international standards. The feasibility studies have confirmed that the physical components of the project are least cost; various alternatives (see in annex 2) have been studied and factors such as cost, construction time, availability and reliability, and environmental considerations have been considered. The project presents no unusual construction and operational challenges. The technical parameters and estimated project costs for the HFO power plants (including adequate contingencies) have been established by ELECTRA and its consultants and checked against actual costs for similar plants worldwide, including in Cape Verde. The project will be implemented according to internationally accepted technical criteria and standards, with the assistance of international consultants. Component 2, 3 and 4 pose no particular issue as the activities are technically straightforward. The procurement will be undertaken following Bank procurement rules and procedures with the support of ELECTRA owner's engineer financed under the project.

C. Financial Management

112. *Financial assessment*: The inherent risk of the public financial management system in Cape Verde is rated Substantial at the country and entity levels. To mitigate the country and project risks, the PIU under the oversight of the Ministry of Tourism, Industry and Energy (MTIE) will have the overall coordination of the FM and accounting activities. A financial capacity management assessment was carried out during project preparation in accordance with the Financial Management Practices Manual issued by the Financial Management Board on November 3, 2005. The objective of this assessment was to determine whether the MTIE

has acceptable financial management arrangements to ensure that: (i) the funds will be used only for the intended purposes in an efficient and economic manner; (ii) accurate, reliable, and timely periodic financial reports are prepared; and (iii) the entity's assets are safeguarded. The conclusion of this assessment is that the MTIE has the minimum condition to manage IBRD funds of the Recovery and Reform of Electricity Sector Project.

D. Procurement

113. Based on the assessment of the PIU's capacity to implement Bank procurement, the overall project risk for procurement is Substantial and is expected to be Moderate once the mitigation measures are implemented. Please refer to Annex 12 for detailed information.

114. The assessment carried out during Project preparation showed that the main issues/risks concerning the procurement activities for the Project's implementation are: (i) the PIU has developed an administrative and financial procedures manual which includes procurement procedures (including THE BANK's procedures). However, this manual doesn't take into account the new Procurement Guidelines dated January 2011; (ii) since the transfer of the PIU in the building of the Ministry in charge of Energy, the safety of the archives is not fully guaranteed (most of the rooms in the building cannot be locked). This is the case of the room occupied by Administration, Finance and Procurement, even if the archives are well kept; (iv) although the PIU's staff is familiar with World Bank procurement procedures, he needs to update his knowledge in this matter.

115. To address these risks, the proposed Project will sponsor three activities: (i) update the administrative accounting, and financial procedures; this job will be handled internally without external assistance(ii) secure the archives of the Administration, Financial and Procurement units by keeping the offices locked after work; and (iii) train the PIU's project team in World Bank basic procurement procedures, particularly on the new Guidelines dated January 2011 that will apply to the proposed project.

E. Social (Including safeguards)

116. The project design is intended to contribute to the social and economic development of the country as a whole. **The project is rated as category B** and **triggers only the Bank's Safeguard Policy OP 4. 01** in light of the proposed operations to be funded under component 1: (i) Extension of the Palmarejo Power Plant (Praia), (ii) Extension of Mindelo Power Plant on Sao-Vicente Island, and (iii) construction of an additional water storage capacity in Palmarejo (Praia) of about 3000m^3.

117. Although the foreseen potential environmental and social impacts of the three main investments under the proposed project are expected to be generally minimal, site specific and easily manageable, they therefore require appropriate mitigation.

118. The GoCV has prepared three standalone ESIAs each including an ESMP for the proposed investments, namely the *Extension of the Palmarejo Power Plant (Praia), Extension of Mindelo Power Plant on Sao Vicente Island, and Construction of two additional water storage tanks (capacity:2x1,500m^3) in Palmarejo (Praia).* The foreseen negative impacts of the project are expected to be minimal and site specific (activities will take place in existing power and water stations); human settlements are within boundaries relatively distant from the existing stations) the policy will remain triggered to safeguard any potential risk that would result in land acquisition, restriction to access and/or loss of tangible livelihoods supporting assets.

119. An Environmental and Social Management Framework (ESMF) has also been prepared and the ESMF has been disclosed both in country and at the Bank's Infoshop in

December 2010. The ESIAs for the three main investments of the project have also been prepared and cleared and have been disclosed in-country and at the Bank's InfoShop before project's appraisal in November 2011. The project also prepared and disclosed an RPF and disclosed it in-country and at the InfoShop in December 2010.

120. Overall coordination of the project environmental and social safeguards function will be carried out by ELECTRA, who will appoint a seasoned environmental and social specialist to that effect, no later than 30 days after project effectiveness. He/she will be responsible for overseeing project compliance with environmental and social guidelines and proposed mitigation plans in implementing Component 1 and 2 of the project, in accordance with national and Bank policies and procedures.

121. All contractor bidding documents will include specific environmental and social clauses to be strictly implemented during implementation phase. Resident Engineers will be appointed at each of the construction sites to closely monitor contractors' work. The resident engineer's team shall include an environmental and social specialist, who will attend to the effective mitigation measures incumbent to the contractor.

122. Responsibility and oversight of project's overall compliance with national and Bank environmental and social safeguards policies will be devolved to the Project Implementation Unit (PIU), who will be working with the Environmental and Social Unit of ELECTRA, and in close collaboration with the Ministry of Environment, and other technical agencies involved, or able to play a vital role water supply and sanitation facilities.

123. A second dimension of the monitoring program would focus on sound operations of energy and potable water production and supply water systems. This calls for regular review, as described in the reports, of the system performance standards, observance of EHS standards, as it applies to the biophysical environment, company's employees and local community health, safety and well being. Required information will be collected to monitor attainment of those standards in an efficient and timely fashion.

F. Environment (including safeguards)

124. The project **triggers policy 4.01** Environmental Assessment as is rated as **category B**. That is, the environmental and social impacts of the project described, are, for the most part, projected to be minimal, site-specific and manageable to an acceptable level.

125. As described above, the GoCV has prepared three standalone ESIAs each including an ESMP for the proposed main investments The ESIAs/ESMPs were prepared by the Borrower in line with national and World Bank policies. The preparation of the instruments involved relevant stakeholder groups in the public sector. This consultation was broadened to all stakeholders, including, the private sector, municipal workers and local communities themselves, consistent with the approach adopted at project's inception. The main objective was to devise an appropriate mitigation plan that is commensurate to the identified impacts.

126. The ESIAs/ESMPs for investments in component 1 of the project have been prepared and have been disclosed before appraisal. Relevant provisions from the two sets of safeguard documents will be reflected in the Project Implementation Manual (PIM).

127. The ESIAs/ESMPs provides an in-depth and comprehensive analysis of the environmental impacts/risks during construction, exploitation and maintenance phases (biophysical and socioeconomic environments) associated with these investments, as well as devise mitigation measures commensurate with those impacts. These mitigation measures are detailed in the Environmental and Social Impacts Assessments (ESIA/ESMP), along with the RPF which will be disclosed in-country and at the Bank's InfoShop prior to appraisal.

128. The ESMP derived from the ESIA provides for a systematic screening process for the investment components, namely: (i) power generation in Praia and Mindelo; and (ii) water desalination plant in Praia with a storage capacity. They define procedures and institutional responsibilities and set out basic guidelines and principles to be used for subproject level environment and social assessments, evaluation of potential impacts and preparation of appropriate mitigation measures through (ESIAs/ESMPs) during project implementation, if deemed necessary.

129. In addition, taken together the safeguard instruments provide sound institutional arrangements for implementing and monitoring project activities, outlining the roles and responsibilities of the various technical agencies and stakeholder groups involved with the implementation and monitoring of identified measures. The ESMPs also make provisions for capacity strengthening measures and awareness raising campaigns targeting relevant actors closely involved with implementation and monitoring of project environmental and social management. Overall coordination of the project environmental and social safeguard function will be carried by Electra, which will appoint a seasoned environmental and social specialist to that effect, no later than 30 days after project effectiveness. He/she will be responsible for overseeing project compliance with environmental and social guidelines and proposed mitigation plans in implementing Component 1 of the project, in accordance with national and Bank policies and procedures. Further details about safeguards monitoring is provided in Annex 13.

130. World Bank supervision teams will also include environmental and social safeguard experts. To ensure effective Bank supervision, the Environmental and Social Specialist of ELECTRA will prepare and update, for review, detailed reports on the implementation of the ESMP and RAP (as applicable) before Bank supervision missions. The Bank safeguards specialists will be responsible for corroborating these results and will contribute to updating the ISR.

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[x]	[ ]
Natural Habitats (OP/BP 4.04)	[ ]	[x]
Pest Management (OP 4.09)	[ ]	[x]
Physical Cultural Resources (OP/BP 4.11)	[ ]	[x]
Involuntary Resettlement (OP/BP 4.12)	[ ]	[x]
Indigenous Peoples (OP/BP 4.10)	[ ]	[x]
Forests (OP/BP 4.36)	[ ]	[x]
Safety of Dams (OP/BP 4.37)	[ ]	[x]
Projects in Disputed Areas (OP/BP 7.60)*	[ ]	[x]
Projects on International Waterways (OP/BP 7.50)	[ ]	[x]

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*

G. Loan Conditions and covenants

a. Negotiation and Board: No condition for negotiation or Board presentation

b. Effectiveness conditions:

a. The Subsidiary Loan Agreement has been executed on behalf of the Borrower and ELECTRA.

b. The Project Implementation Manual shall have been adopted by the Borrower in a manner satisfactory to the Bank.

c. The Borrower has adopted and made public the ARE Resolution[4].

c. Covenants:

The Borrower shall:

(i) ensure that by no later than 30 days from the Effective Date, ELECTRA shall have hired an environmental and social specialist under terms of reference, qualifications and experience satisfactory to the Bank who shall be kept in the position throughout Project implementation;

(ii) by no later than 180 days after the Effective Date, have appointed an external financial auditor for the Project under terms of reference and qualifications and experience satisfactory to the Bank;

(iii) ensure that electricity tariff levels are adjusted every four (4) months in order to provide ELECTRA with the maximum allowed revenue set by the regulatory formula provided in the ARE Regulation or else compensate ELECTRA for any loss of revenue caused by insufficient or late tariff adjustments; and

(iv) beginning in the second semester of 2013 and by no later than November 30 of each Fiscal Year thereafter inform the Bank the estimates of ELECTRA yearly financial results for the current Fiscal Year and the forecasted budget for the following Fiscal Year. Should such forecast indicate that ELECTRA would not achieve an interest coverage ratio (EBIT[5]/Interest Costs) of at least 1.5 for the following Fiscal Year, the Borrower shall ensure that ELECTRA will achieve such interest coverage rate by taking the following measures: (i) deferring principal and interest repayments on the on-lent financial debt, and/or (ii) take alternative corrective measures to support ELECTRA and inform the Bank accordingly thereafter

(v) maintain the PIU within the DGE, throughout the implementation of the Project, with functions and resources satisfactory to the Bank;

(vi) prepare and adopt, not later than November 30 of each Fiscal Year during the implementation of the Project, or such later date as the Bank may agree, an annual work plan and budget ("Annual Work Plan and Budget"), in form and substance satisfactory to the Bank, containing a description of all activities (and associated budgeted costs) to be carried out in the following Fiscal Year, except that for the first year of implementation of the Project, it will cover the period from Effective Date through December 31 2012

(vii) maintain a financial management system including records, accounts and preparation of related financial statements in accordance with accounting standards acceptable to the Bank;

[4] The Borrower has completed, adopted and made public the new electricity tariffs' indexing formulas and modalities applicable for the next five years

[5] EBIT: Earnings Before Interest and Tax

(viii) monitor and evaluate the progress of the Project and prepare Project Reports in form, content and substance satisfactory to the Bank; Report shall cover the period of one calendar quarter and shall be submitted to the Bank not letter than forty five (45) days after the end of the period covered by such report;

(ix) submit to the Bank, audited ELECTRA's Financial Statements report and opinions, carried out in accordance with International Standards on Auditing (ISA), within six (6) months of the end of the Borrowers fiscal year;

(x) prepare and submit to the Bank, a quarterly un-audited Interim Financial Report (IFR) of the project, in form and substance satisfactory to the Bank;

(xi) prepare and submit to the Bank, Annual Financial Statements of the project, in form and substance satisfactory to the Bank, and submit the audited report and opinions, including the management letter, no letter than six (6) months after the end of the year.

Annex 1: Results Framework and Monitoring

CAPE VERDE: Recovery and Reform of the Electricity Sector Project
Results Framework

Project Development Objective (PDO):
To increase electricity generation in the Island of Sao Vicente and Santiago and to assist ELECTRA to reduce electricity losses in Santiago Island

PDO Level Results Indicators*	Core	Unit of Measure	Baseline	Cumulative Target Values**					Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5				
PDO Indicator One: Electricity generated, net: • In Sao Vicente island • In Santiago island	☐	GWh/year	 66.01 198.52	 69.84 225.35	 75.65 227.06	 84.50 240.88	 91.98 247.43	 97 267.77	Annual	ELECTRA data	ELECTRA	
PDO Indicator Two: Electricity system losses per year in Santiago Island, total	☒	%	35.4	32.4	28.1	24.0	20.8	18.2	Annual	ELECTRA data	ELECTRA	
PDO Indicator Three: Direct project beneficiaries, of which female (beneficiaries)	☒	Number %	316,107 (52%)	319,900 (52%)	323,739 (52%)	327,624 (52%)	331,555 (52%)	335,534 (52%)	Annual	ELECTRA data	ELECTRA	
PDO Indicator Five:												
INTERMEDIATE RESULTS												
Intermediate Result (Component One): Increased generation capacity in the Island of Sao Vicente and Santiago												
Intermediate Result indicator One: Additional generation capacity constructed under the project: • In Sao Vicente island • In Santiago island	☒	MW	 0 0	 0 0	 5.5 20	 5.5 20	 5.5 20	 5.5 20	Annual	ELECTRA data	ELECTRA	
Intermediate Result indicator Two: Additional water storage capacity in Praia	☐	M^3	0	0	3000	3000	3000	3000	Annual	ELECTRA data	ELECTRA	

Intermediate Result indicator Three: Reduction in the variable costs of electricity generated in Santiago island *(based on the 2011 petroleum products price levels)*	☐	%	0	0	0	10%	17%[6]	17%	Annual	ELECTRA data	ELECTRA	
Intermediate Result (Component Two): Reduced losses in Praia, Santiago												
Intermediate Result indicator One: Percentage of network metered (at the feeder level) in order to implement the loss reduction plan	☒	%	0	15	75	100	100	100	Annual	ELECTRA data	ELECTRA	
Intermediate Result indicator Two: Residential meters installed in Praia (of which prepaid)	☐	Number	0	10,000 (2,000)	16,000 (3,000)	16,000 (3,000)	16,000 (3,000)	16,000 (3,000)	Annual	ELECTRA data	ELECTRA	
Intermediate Result (Component Three): Improved efficiency of ELECTRA and improved reliability of electricity												
Intermediate Result indicator One: Overall energy losses (ELECTRA wide)	☒	%	26.7	24.7	22	20	18.3	16.3	Annual	ELECTRA data	ELECTRA	
Intermediate Result indicator Two: Electricity Collection Rate in Santiago Island	☒	%	93.08	93.81	94.58	95.40	96.27	97.17	Annual	ELECTRA data	ELECTRA	To be confirmed by ELECTRA
Intermediate Result indicator Two: Average Interruption Duration (AID) in Praia	☐	hours	69.67	65.23	60.74	56.45	52.45	48.73	Annual	ELECTRA data	ELECTRA	Based on the Performance Contract
Intermediate Result indicator Four: Sector Financial and Performance Monitoring in Place	☐	Y/N	N	Y	Y	Y	Y	Y	Semi-Annual	GoCV	GoCV	

***Please indicate whether the indicator is a Core Sector Indicator (see further http://coreindicators)**
****Target values should be entered for the years data will be available, not necessarily annually**

[6] Provided HFO 380 is available in PRAIA

Arrangements for results monitoring

The monitoring and evaluation of results and outcomes will be the responsibility of PIU from data supplied by ELECTRA and government ministries and agencies. ELECTRA currently measures the electricity generated and distributed as well as revenues through its power flow and financial monitoring systems. ELECTRA will therefore monitor results of Components 1 through its existing monitoring and control systems and communicate the results to PIU. Given its encompassing nature, the results of component 2 will be monitored by several entities, including ELECTRA, ARE and the Ministry of Economy. The project provides, under Component 3, for strengthening PIU to implement the project and monitor its results. Monitoring of results and outcomes will be reported in PIU's project implementation reports. Furthermore, the Bank will supervise the project over its lifetime and its results and outcomes on a regular basis in order to evaluate the achievement of the project development objectives. Corrective actions, if necessary, will be discussed and agreed with the government.

In addition, the monitoring will also be ensured by the independent auditor (financed under the proposed project) and recruited to monitor the Government commitment and ELECTRA's performance targets agreed and signed as part of the Performance Contract

Definitions and calculation methodologies:

Energy Losses (EL)

- *Definition*

  The indicator shows the energy supplied to the customers versus the total energy generated (gross) at generation plants (this includes both technical and non technical losses). Although it includes the losses in the distribution sector, it also includes the self-consumption of generation plants. This seems contradictory, but it was done to adapt the indicator to the format of data available in ELECTRA.

- *Calculation Methodology*

$$Energy\ \ Losses(\%) = 1 - \left(\frac{\sum_{m=1}^{n} Energy\ \ Sold_m}{\sum_{m=1}^{n} Gross\ Generation_m} \right)$$

  Where:
  - Energy Sold (MWh): Energy billed to the customers within the period.
  - Gross Generation (MWh): Gross energy generated by generation plants.
  - m = month
  - n = 1 to 12, where '12' represents the final indicator value and the rest represent intermediate values.

Electricity Collection Ratio (CR)

- *Definition*

  The collection ratio shows the effectiveness of the company in collecting the billed amount from the customers.

- *Calculation Methodology*

$$Collection\ \ Ratio\ \ (\%) = \left(\frac{\sum_{m=1}^{n} Money\ \ Deposited_m}{\sum_{m=1}^{n} Money\ \ Billed_m} \right)$$

Where:

- Money Deposited (Contos) = total amount of money deposited in the central account coming from collection.
  This amount should be equal to the money collected in the year. However, lack of clarity in the reconciliation and debt recording as per the auditors advises that we use this input. The central account used for this purposes must be independent from any other account in the company, and only be used for depositing the money collected. Variations in the working capital for the commercial offices and/or money for expenditures must be managed from other accounts.
- Money Billed (Contos) = total amount of money billed to customers and expected to be collected.
- m = month
- n = 1 to 12, where '12' represents the final indicator value and the rest represent intermediate values.

Average Interruption Duration (AID)

- *Definition*

  This index represents the average time of interruption of service per year per customers. In this way, it would be calculated taking into account load shedding, planned, and non-planned interruptions.

  Only interruptions lasting longer than 3 minutes are taken into account.

- *Calculation Methodology*

$$AID\ (hours) = \frac{1}{60} \cdot \left(\frac{\sum_{m=1}^{n} \sum_{i=1}^{I_m} C_i \times d_i}{C_t} \right)$$

Where,

- C_i = Number of customers affected by the interruption 'i'.
- d_i: Duration of the interruption 'i' in minutes.
- I_m = Total Number of Interruptions during month 'm' (planned and non planned).
- C_t = Total number of customers in the company.
- m = month.
- n = 1 to 12, where '12' represents the final indicator value and the rest represent intermediate values.

Annex 2: Detailed Project Description

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

Project Description:

1. The Project consists of the following components:

Component 1: Priority Investments in Electricity and Water (about US$42.5 million)

a) Extension of Palmarejo Power Plant in Praia (Island of Santiago), including through the installation of two 10MW heavy fuel oil (HFO) fired unit(s) of electricity generation.

b) Extension of Lazareto Power Plant in Mindelo (Island of Sao Vicente), including through the installation of one 5.5MW HFO fired unit(s) of electricity generation.

c) Provision of additional water storage capacity in Palmarejo, including through the construction and installation of two water storage tanks and related interconnecting pipes at Palmarejo Power Plant.

Component 2: Support for ELECTRA's Loss Reduction Plan (about US$6 million)

a) Improvement of ELECTRA's ability to measure energy balances at different levels of electricity transmission and distribution chain, including through the provision of metering equipment.

b) Provision of support for reducing electricity distribution losses by preventing meter and metering installation tampering, including through the provision and installation of metering technology.

c) Provision of support to ensure proper management and optimization of the remote metering capabilities installed in the existing system, through the design and implementation of an automatic metering management system.

Component 3: Support for ELECTRA's Reform and Sector Governance (about US$1.5 million)

a) Provision of support for the electricity sector' reform and reorganization of ELECTRA, including through the provision of technical assistance to complete the design and implement key reform steps in the electricity and water sectors.

b) Provision of support for monitoring the Performance Management Contract, including through the provision of technical assistance.

Component 4: Project Implementation, Communication and Monitoring and Evaluation (about US$ 3 million)

a) Provision of support to the PIU for effective implementation and supervision of the Project, including through the provision of technical assistance, training, audits and design and carrying out of a communication campaign to disseminate ELECTRA's reform.

b) Provision of support to ELECTRA for effective supervision of the Parts A and B of the Project, including through the provision of technical assistance

2. Detailed description of the project is presented below:

Component 1: Priority investments in electricity and water (about US$42.5 million) **(**excluding a 10% contingency)

3. This component will support part of an ambitious investment program for which funding has been mobilized from several donors and financiers (African Development Bank (AfdB), Japanese Cooperation (JICA), Spanish Cooperation, Portuguese Cooperation, Dutch Cooperation (ORET), Austrian Cooperation, the French Development Agency (AFD), etc.). This program is based on a coherent overall investment planning approach and covers the essential investment needs in the areas of power generation, electricity transmission and distribution, water production and storage. Once implemented, it will have a very significant impact in term of cost reduction as well as increased supply.

4. The investment component of the project will focus on priority investments that will allow ELECTRA to both meet the electricity and water needs of the islands of Santiago and Sao Vicente but also contribute to improve its technical and financial performance. A pre-feasibility study for the proposed investments has been completed during project preparation. The feasibility studies have confirmed that the priority investments considered by the project are least cost; various alternatives[7] have been studied and factors such as cost, time to construct, availability and reliability, and also environmental considerations have been considered.

5. For guarantying constant and reliable electricity supply, fossil fuel generated power is still required and Electra's intentions to convert its existing plant to burn HFO instead of LFO and gas oil, together with the new HFO plants gives Electra the most cost effective and reliable means of electricity generation. In the short term by keeping with the same technology as is currently used ensures that Electra receives a technology that is reliable, cost effective and familiar, with little required in the way of modification to the existing infrastructure. Based on the high efficiency and flexibility of diesel engines together with the experience of the operation staff with diesel engine power generation, the procurement of additional HFO fired medium speed diesel engines as envisaged under the project represents the least-cost most effective solution to increase the installed electricity capacity of Santiago and Sao Vicente complementing the already existing renewable sources (26MW from the IPP Cabeolica wind farm project and 7,5MW of solar generation).

6. The project proposes the financing of the following investments:

- ***Extension of Palmarejo Power Plant in Praia (Island of Santiago)*** including through the installation of two 10MW heavy fuel oil (HFO) fired generating unit(s) of electricity generation.

  The island of Santiago will require an additional 2 x 10MW Heavy Fuel Oil (HFO) fired generating unit(s) of electricity generation by 2013 to meet the increasing daily max demand loads of the island. The cost to install 2 x 10MW of additional medium speed diesel engines at the Palmarejo power plant (PRAIA) should be approximately (based on the feasibility study): **US$30,000,000**

  Praia Electricity is supplied by the Power Plant of Palmarejo and by the Power Plant of Gamboa which generates less than 4% of the 136 GWH generated in 2009. (Gamboa Power Plant is equipped with old generators set burning gas-oil with a low efficiency and the generated kWh cost is 26.91ECV, which is higher than the selling

[7] Main alternatives considered: new build gas turbine, gas fired combine cycle, coal, additional wind turbines, additional photovoltaic, new build hydro plant.

price. This Power Plant is in operation only when the Palmarejo Power Plant cannot match the demand. These generator sets are planned for retirement).

The Palmarejo Power Plant is equipped with 4 units Caterpillar burning Fuel oil 180 but is capable of burning Fuel oil 380 when available.

Table 9: Palmarejo Power Plant

	Commissioning year	Capacity	% of Energy Generated in 2009
G1	2002	5.5 MW	12.9%
G2	2002	5.5 MW	16.2%
G3	2008	7.4 MW	33.1%
G4	2008	7.4 MW	33.2%

A new plant, Palmarejo extension II, under the African Development Bank (AfDB) financing, is being constructed by Wartsila which will provide 2 x 11,235 MW of power to the island of Praia. The commissioning is scheduled by the end of 2011 or early 2012.

Table 10: Palmarejo extension II

	Commissioning year	Capacity	Manufacturer
G5	2012	11.235 MW	Wartsila
G7	2012	11.235	Wartsila

It is proposed to install an additional 2 x 10 MW capacity at the Palmarejo site, Palmarejo extension III, with the objective of bringing this additional capacity onto the grid by 2013. Once this additional capacity is on the grid, the "old" Gamboa power station will be shut down and decommissioned.

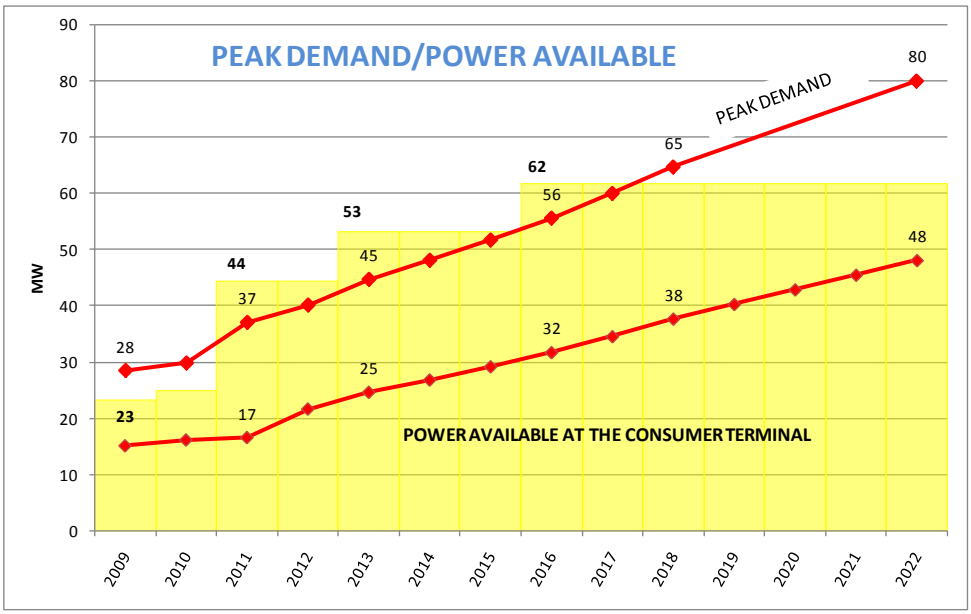
Project justification. The Palmarejo Power Plant cannot currently supply the forecast peak demand. To increase its capacity to meet an increasing demand, an important investment program is under development. The total annual requirement for sent-out energy from the power stations in Palmarejo is expected to reach 235 GWh in 2014 and to increase steadily to 330 GWh by 2018.

The required generation capacity is expected to steadily increase, with 30 MW peak required in 2010 and increasing to 66 MW in 2018. The following Graph 1 shows this increasing peak demand and the power available including planned developments.

In addition to the two extensions in Palmarejo, two renewable energy projects have been commissioned in 2011:

- Solar Plant and back up (+4 MW in 2010): under the Portuguese cooperation financing, three (3) generators sets burning gasoil should be commissioned before June 2010. These units will generate 4.9 MW as a back-up for the solar installation (5 MW) commissioned in 2011.
- Cabeolica wind farm project: the installation of a 10 MW peak wind farm is also scheduled to be commissioned by 2011.

Graph 1: Peak Demand/Power available



Additional installed capacity will be required by 2017 to satisfy the max demand growth forecasts of the island of Santiago.

HFO availability in Santiago: There is a project under way to allow for HFO 380 to be brought ashore to the island of Santiago. This project is due for completion in 2014/2015 and will yield a saving of over US$800,000 a year compared to using LFO 180.

Conceptual design, technical specification and bidding documents: An exhaustive conceptual design has been prepared and is described in the feasibility study completed in September 2011by the consultant Mott MacDonald. Based on this design, detailed technical specification and bidding documents are under preparation by the consultant and the bidding process should be initiated in January 2012.

Environmental considerations: An Environmental and Social Assessment (ESIA) has been undertaken in accordance with Decree-Law 29 of March 6, 2006 and finalized in June 2011. The recommendations of the ESIA have been taken into account in the feasibility study and bidding documents.

Project location: The proposed location for the phase III project is directly adjacent to the Wartsila phase II project which is currently under construction.

Capital cost estimates: the estimated cost of the Extension III to construct 2 x 10 MW of additional capacity at the Palmarejo power station is estimated (based on the feasibility study) to **US$30,000,000.**

- ***Extension of Lazareto Power Plant in Mindelo (Island of Sao Vicente)*** including through the installation of one 5.5MW HFO fired generating unit(s) of electricity generation.

  Additional capacity of 5.5MW Heavy Fuel Oil (HFO) fired generating unit(s) of electricity generation is also required on the island of Saõ Vicente by 2013. A second 5.5 MW engine would be required preferably by 2015 at the latest. The proposed project will finance the main facilities for 2 x 5.5MW, but will finance only one engine. The cost to install 1 x 5.5MW at Lazareto power plant should be

approximately (based on the feasibility study): **US$11,000,000** for 1x 5.5MW. *(The cost would be approximately: US$17,700,000 for 2x 5.5MW).*

Generation capacity at San Vincent is resumed in the following Table 11:

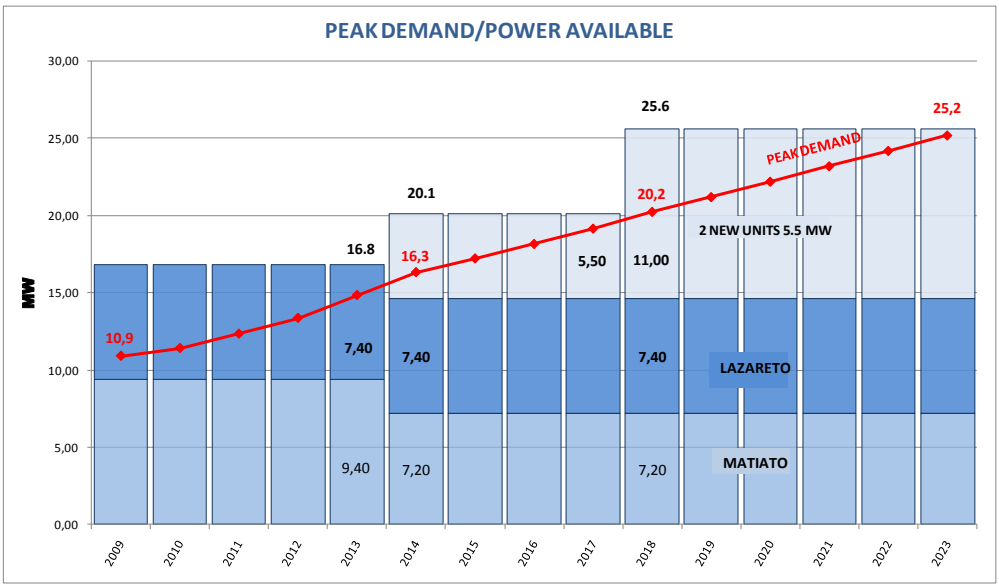
Table 11: Generation Capacity at San Vincent

Location		Commissioning year	capacity	% of Energy Generated in 2009
Matiota	FO 180	1994	3.6 MW	29%
Matiota	FO 180	1994	3.6 MW	
Matiota	Gasoil	1975	2.75 MVA	
Matiota	Gasoil	1982	2.95 MVA	
Lazareto	HFO	2002	3.7 MW	64%
Lazareto	HFO	2002	3.7 MW	
Wind farm		November 2011	8 MW	7%

The objective of the proposed investment is to replace the used gasoil units at Matiota (which are operating with low efficiency and at a much higher cost) by HFO unit at to be installed at the Lazareto Power Plant.

The total annual requirement for sent-out energy from the power stations is expected to reach 72 GWh and to increase steadily to 89 GWh in 2018. The required generation capacity is expected to steadily increase, with 12,3 MW peak required in 2011 and increasing to 20 MW by 2018. The following Graph 2 shows the expected peak demand and power available including the planned extension and retirement of gasoil units.

Graph 2: Expected Peak demand/Power available



Based on the ELECTRA forecast and the generating capacity, the first additional 5.5 MW unit must be operating by 2013/2014.

Therefore, the extension of the Lazareto Power Plant in Mindelo consists in increasing the generating capacity in Mindelo by adding one unit of 5.5 MW burning HFO 380. At first, housing and common auxiliaries for two units of 5.5 MW and one

generator set 5.5 MW shall be supplied under this operation (2013/2014). Later on a second unit of 5.5 MW shall be installed (2015/2016).

HFO availability in Mindelo: Lazareto is currently supplied with HFO 380 fuel. The existing plant has a 430m^3 capacity HFO tank, and a day tank with a capacity of 150 m^3. This gives approximately enough storage for around 11 days at maximum power. With the phase II expansion, based on 2x5.5MW, additional storage will be required

Conceptual design and bidding documents: An exhaustive conceptual design has been prepared and is described in the feasibility study completed in September 2011by the consultant Mott MacDonald. Based on this design, technical specifications and bidding documents are under preparation by the consultant and the bidding process should be initiated in January 2012. The consultant recommended that a complete stand alone HFO treatment system be supplied by the contractor. This will be specified in the technical Specification of the plant.

Environmental considerations: An Environmental and Social Assessment (ESIA) has been undertaken in accordance with Decree-Law 29 of March 6, 2006 and finalized in June 2011. The recommendations of the ESIA have been taken into account in the feasibility study and bidding documents.

Project location: The proposed extension to the Lazareto power plant will be located adjacent to the existing power plant, within the current boundaries of the existing power plant, owned by ELECTRA.

Capital cost estimates: The cost to install 1 x 5.5MW at Lazareto power plant is estimated to (based on the feasibility study): **US$11,000,000** for 1x 5.5MW. *(The cost would be approximately: US$17,700,000 for 2x 5.5MW).*

- ***Additional water storage capacity in Palmarejo*** including through the construction and installation of two water storage reservoirs and related interconnecting pipes at Palmarejo Power Plant.

  Additional water storage capacity in Palmarejo (Praia)An additional 2 x 1500m^3 storage tanks are required at Palmarejo to satisfy the increasing demand for potable water on the island of Santiago. This extra storage capacity will bring more flexibility to ELECTRA with regard to water production through desalination which is an electricity-intensive process and will contribute positively to the optimization of power generation by avoiding water production during the electricity demand peak hours. Furthermore having 2 x 1500m^3 will provide a sufficient buffer to ensure that during unscheduled power outages that there is enough stored supply of water to meet the island's needs. The estimated cost to fabricate 2 x 1500m^3 concrete tanks at Palmarejo, including interconnecting pipe work should be approximately (based on the feasibility study): **US$1,500,000**

  Water supply for Praia is provided by ELECTRA. In 2009, 2.4 millions of m^3 have been produced and 85 % of them are desalinated. Underground water is already used at the maximum and no significant increase may be expected; it means that all the incremental water shall be produced via desalination.

  One unit of 5000 m^3/day and two units of 1200 m^3/day are producing in parallel drinkable water for the entire Praia area. They are located at Palmarejo close to the

Power station. They use an osmotic system which remains the most efficient system as of today and all other ways to desalinize sea water have been abandoned by ELECTRA.

Construction of Water Storage of 3 000 m^3 at Palmarejo water plant (**Praia**): the objective of the proposed investment is to increase the water storage capacity by adding a new storage of 3000m^3. The purpose of this storage is to secure the water supply in Praia and to collect desalinated water from the desalination units as a buffer tank before pumping it into Praia network.

A new network feeder with a pipe of 500 mm diameter and a new pumping station at Palmarejo water plant are currently being constructed.

When the second desalination unit will be in operation, existing storage shall be only for 3 hours of production and there is no safety to supply the consumers in case of major shut-down of the desalination plant.

The planned additional 3,000 m^3 storage should increase the capacity to store to a total of 4,500 m^3 of treated water. This future storage capacity allows storing the water produced by one desalination unit during 21 hours or the water produced by four units during 5 hours.

Locations: There are two possible locations.

- The preferred one - Figure 8- more convenient because closer to the existing reservoir- requires action of ELECTRA to remove old and unused existing treatment installation which belongs to another company but built on ELECTRA land.

- The Alternative location – Figure 9- is possible but access to the land behind it and to the sea water intakes could be restricted.

The preferred storage location at Palmarejo plant shall be checked and approved by ELECTRA.

Figure 8
Preferred location

Figure 9
Alternative location

Conceptual design and bidding documents: An exhaustive conceptual design has been prepared and is described in the feasibility study completed in September 2011by the consultant Mott MacDonald. Based on this design, technical specifications and bidding documents are under preparation by the consultant and the

bidding process should be initiated in January 2012. Storage must be built in concrete to avoid any corrosion. It is required to have a double storage (2X 1 500 m3) to allow maintenance without stopping the water supply to the network. Metallic surface must be carefully protected to avoid saline corrosion. Due to the emergency to repair the existing storage, the new storage must be in operation as soon as possible.

Environmental considerations: An Environmental and Social Assessment (ESIA) has been undertaken in accordance with Decree-Law 29 of March 6, 2006 and finalized in June 2011. The recommendations of the ESIA have been taken into account in the feasibility study and bidding documents.

Capital cost estimates: The cost to install to construct the tank is estimated to (based on the feasibility study): **US$1.5 million**.

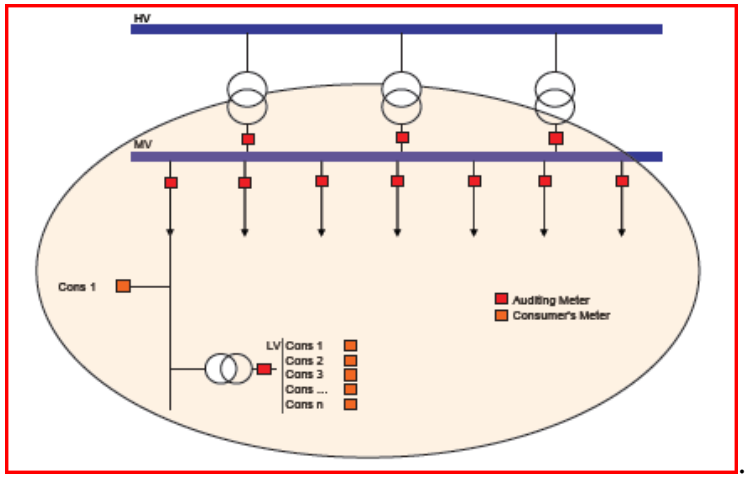
Project Component 2: Support ELECTRA's loss reduction plan (US$ 6.0 million).

7. This project component will finance a series of loss reduction activities aimed at enhancing ELECTRA's operational performance in the short term. These actions steam from a comprehensive analysis of ELECTRA's current capabilities and are part of a broader action plan put together by the consulting firm Mercados, which is currently assisting the Government in restructuring ELECTRA and the overall sector. Based on the consultant action plan as presented in Annex X, this component will focus on improving ELECTRA's short-term viability and therefore build the foundation for longer term operational and financial sustainability. Three-subcomponents are envisaged as described below.

Sub-component 2.1 (US$ 2.3 million): This subcomponent will finance metering equipments aimed at improving the ELECTRA's ability to proper measure energy balances at different levels of the electricity transmission and distribution chain and therefore allow accurate energy flow control. The electricity transmission and distribution grid may be divided into three main levels:

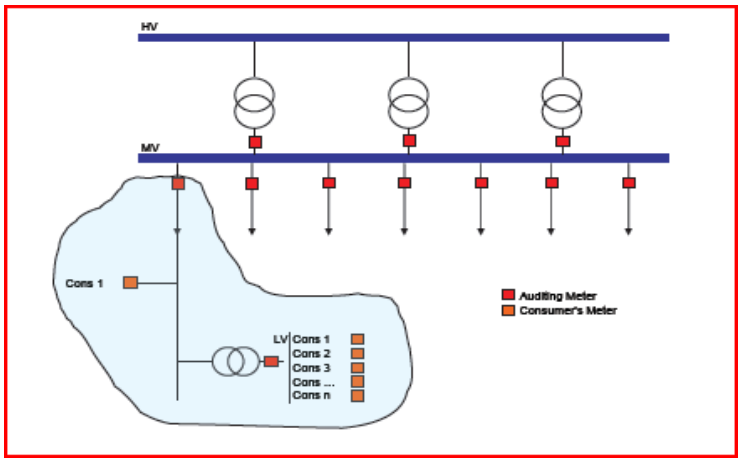
Level 1: HV-MV/MV Substation. This is the highest level energy monitoring at the company. The implementation of this control is mandatory in order to determine loads and potential energy leakages in the grid (see Figure 10 below). HV in ELECTRA is represented by the generation Groups.

Figure 10: Level 1 - HV-MV/MV Substation



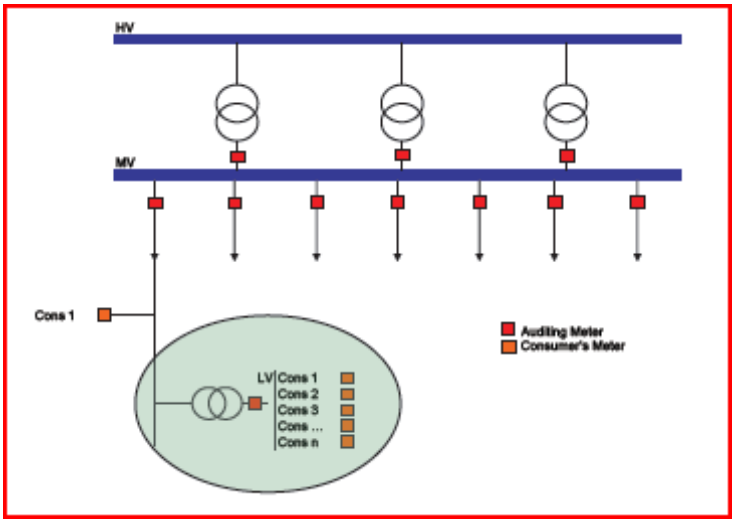
Level 2: Feeder Control. The second level involves energy balances at MV energy feeder outgoing from substations. This level involves both MV and LV consumers, as illustrated in Figure 11 below.

Figure 11: Level 2 – Feeder Control



Level 3: LV Substations Control. This is the lowest control level where accurate and geographically precise energy balances are required. This information will be the most important for final losses detection as it involves a small enough sub-set of consumers that detection of energy losses and irregular registration is much easier.

Figure 12: Level 3 – LV Substations Control



A series of metering investments are needed at the different level of the grid to ensure an improvement in the company energy audit operations and reduction of losses in the short term. In particular, large customers connected at MV and generation plants connections are the most important control points in a distribution utility. On one hand, substations energy registering provides the primary information about the energy supplied to the system. On the other hand, a large percentage of the energy is supplied to a few consumers connected at MV level. Thus, they are key issues to preserve and control present and future revenues.

The following Table 13 shows metering investments are proposed at the different levels in the grid:

Table 13: Metering investments

Level	**Quantity**	**Unit Cost (USD)**	**Subtotal (USD)**
MV Feeders	83	2,372	196,918
MV/LV Substations	690	2,372	1,637,025
Large Customers (MT)	134	2,243	300,495
Controlling System	1	195,000	195,000
Hardware for Monitoring	2	1,950	3,900
Total			2,333,338

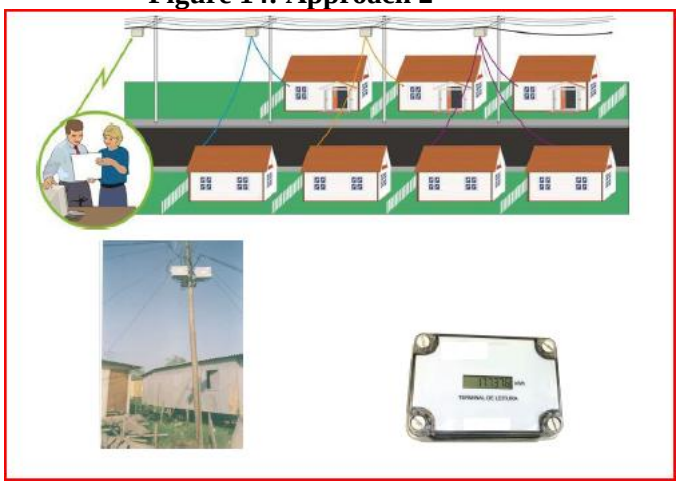
Each metering investment includes meters, current voltage transformers, meter box, modem, installation costs and depending on the level of the grid, also public lightening meter and concentrator.

Sub-component 2.2 (US$ 3.2 million): This sub-component will finance improvement of metering technology for about 16,000 customers in Praia currently using indirect metering set, three phase direct meters, and single-phase direct meters. This component is aimed at reducing losses by preventing the meter and the whole metering installation to be manipulated by any non-authorized person.

Depending on the area where the installation will be carried out, two approaches are possible: i) installation outside the house or in the client's external wall; or ii) installation of meters in boxes on top of the closest pole. The two Figures 13 and 14 below outline the two approaches.

Figure 13: Approach 1

Figure 14: Approach 2



Communications methodology recommended by the consultant is PLC. ELECTRA's LV feeders' average length is within a reasonable range for this technology. Alternative to PLC may be radio communications.

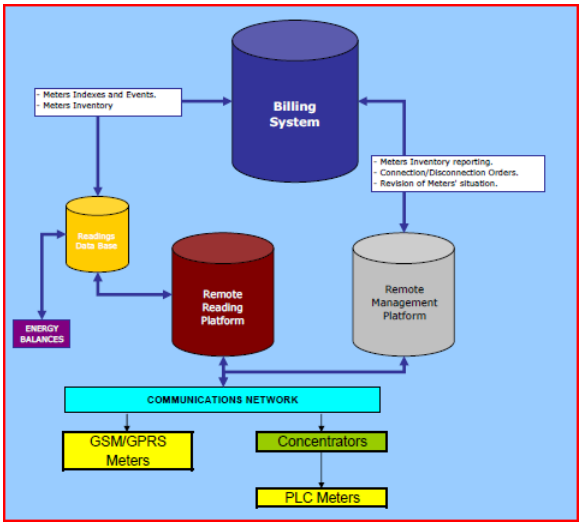
The metering equipment installed under this component will include the meter (with PLC communications facilities; all with disconnection capabilities), current transformers (it is estimated that 50% of them are to be replaced at this level), meter box (it is estimated that 50% of them are to be replaced at this level), installation costs. The estimated cost for each installed metering system is USD 195 on average.

Sub-component 2.3 (US$ 0.5 million): This sub-component will finance the design and installation of an Automatic Metering Management System to ensure proper management and optimization of the remote metering capabilities installed in the existing system.

Implementation of a full Automatic Metering Management requires dealing with loads of information accurately registered and available on line. This information must be processed automatically by the MIS (Management Information Systems) in order not to make any mistake and to provide quick response to both the company and the customers' needs.

In its report, the consultant provided a series of recommendations on how to organize and integrate the remote metering capabilities with the existing systems. The proposed system is illustrated in the Figure 15 below.

Figure 15: Proposed Automatic Metering Management System



This sub-component will support the design and implementation of the system as follows:

Table 14: Estimated Cost for the Automatic Metering Management System

Item	Cost (USD)
Multiprotocol Remote Meter Reading Platform	260,000
ORACLE database	26,000
Remote Metering Platform	13,000
Server	6,500
Communication Facilities	26,000
Interfaces	19,500
Implementation	97,500
Total	448,500

Component 3: Support to ELECTRA's Reform and Sector Governance (IBRD US$ 1.5 million)

8. ***Sub-component 3.1 - ELECTRA reorganization***: One of the major phenomenon that has contributed to derailing ELECTRA's financial viability for the last five years is the large and widening performance gap between the Northern islands, where ELECTRA management is located (in Mindelo, the second largest city in Cape Verde) and the Southern islands, and in particular Santiago island, which includes the capital Praia, and represents more than half of the customer base. The rate of total electricity distribution losses in the Southern islands is more than twice as high as in the North and reflects widespread electricity theft concentrated in one part of the country. The absence of an effective management structure in position of responsibility and accountability in the South appears to have been a major contributing factor for the performance divergence within ELECTRA.

9. The GoCV has decided (within a horizon of 2 to 4 years) to reorganize and restructure ELECTRA on a regional basis, which would involve putting in place a management team in the South, with a large autonomy and spate technical, commercial and financial reporting. Some functions for which synergies are significant would remain centralized. Following ELECTRA internal reorganization, the ultimate objective of the GoCV would be to maintain the centralized functions within the existing legal entity ELECTRA and to transfer the other functions, operations and assets to two regional subsidiaries. This regional unbundling would

appear adapted to the realities of Cape Verde power sector (functional unbundling would not make sense given the absence of interconnection between islands). The GoCV has requested Bank assistance to examine in details the gradual establishment of (a) two (2) autonomous subsidiaries corresponding to ELECTRA North (S. Vicente, S. Antão, S. Nicolau, Boavista and Sal), and ELECTRA South (Santiago, Maio, Fogo and Brava), and (b) a holding company. A comprehensive feasibility study of this option has been undertaken during project preparation.

10. Component 3 will support the Government effort to reform the electricity and water sector. In particular, it will finance the contract of a reputable international consultancy firm to assist the Government in designing and implementing the key reform steps. The consultant has already been recruited under Advanced Financing and the Government has already committed to anticipate about 30% of the contract amount to accelerate the reform process.

11. ***Subcomponent 3.2 – Monitoring of the performance contract***: Under this component, the Government has also requested IBRD to finance the appointment of an independent auditor to monitor the Government commitment and ELECTRA's performance targets to ensure they reflect what it has been agreed and signed as part of the Performance Contract (see Attachment 2 in Annex 7).

Component 4: Project implementation, communication and monitoring and evaluation (IBRD US$ 1.5 million and GoCV US$ 1.5 million)

12. This component will provide the Government and ELECTRA with the technical assistance and support required to implement and supervise the project through the provision of technical assistance, training and audits. In particular, it will include the recruitment of supervisory engineering consultants (Owners Engineer) for ELECTRA, support for the Project Implementing Unit, a financial management project auditor and communication activities (especially in relation with ELECTRA's restructuring).

13. The Project will support a "Participatory Monitoring and Evaluation" by providing resources to design and implement a Monitoring and Evaluation System that will: (a) assist the MTIE in better carrying out its policy making and oversight function; (b) assist the PIU of the MTIE and ELECTRA - in monitoring and assessing the impacts of the activities supported by the Project. A project monitoring and evaluation specialist will be recruited to ensure proper and timely project implementation.

14. This component will also intend to ensure transparency and credibility and to provide information feedback during project implementation through consultations with the main stakeholders in the electricity and water sectors, and communication. These stakeholders are: the public sector institutions involved in Cape Verde's energy and water sectors and other private entities participating in Cape Verde's energy and water sectors, the consumers and the Donor Community. This task will be carried out by the PIU within the MTIE and by ELECTRA's.

15. The PIU will be financed under GoCV funding. (around US$350,000 per year)

Project Costs

16. The RRESP cost is estimated at US$58.5 million to be financed by an IBRD loan of US$53.5 million. GoCV counterpart contribution will amount to US$ 5.0 million. A summary of project costs is provided in Table below:

Table 15: Project Costs

Components	Cost (US$ million)
Component 1: **Priority investments in electricity and water**	**42.50**
• *Extension of the Palmarejo Power Plant (Praia):* additional 2 x 10 MW Heavy Fuel Oil (HFO) fired generating unit(s) of electricity generation	30.00
• *Extension of the Lazareto Power Plant (Mindelo):* additional 1 x 5.5 MW Heavy Fuel Oil (HFO) fired generating unit(s) of electricity generation *(with common facilities for another 5.5MW unit to be installed in the future)*	11.00
• *Additional water storage capacity in Palmarejo (Praia)*: 2 x 1,50 m^3 storage tanks	1.50
Component 2: **Support ELECTRA's loss reduction plan**	**6.00**
• *Grid metering equipment:* to improve ELECTRA's ability to properly measure energy balances at different level of the electricity chain	2.30
• *Customer metering equipment:* to support for reducing electricity distribution losses in PRAIA	3.20
• *Implementation of an Automatic Metering System*: to ensure proper management and optimization of the remote metering capabilities of ELECTRA	0.50
Component 3: **Support ELECTRA's reform and Sector Governance**	**1.50**
• *Technical Assistance:* to complete the design and implement key sector reform steps and reorganization of ELECTRA	1.25
• Technical Assistance: to support for monitoring of the Performance Contract signed between ELECTRA's board and the GoCV	0.25
Component 4: **Project Implementation, Communication and Monitoring and Evaluation**	**3.0**
• *Support the PIU* for effective implementation and supervision of the Project including through the provision of technical assistance, training, audits and design and carrying out of a communication campaign to disseminate ELECTRA's reform *(including PIU's costs financed by the GoCV)*	2.50
• *Support ELECTRA* for effective supervision of the Part A and B of the Project including through the provision of technical assistance	0.50
PPA refinancing	**0.50**
Contingencies (10% of C1 and C2)	**5.00**
Total RREWS	**58.50**
Including IBRD	*53.50*
Including GoCV	*5.00*

17. Table 16 below provides a detailed description of the disbursement table by categories of eligible expenditures:

Table 16: Project costs by category

Category	**Amount of the Grant Allocated** (expressed in US$ million equivalent)	**Percentage of expenditure to be financed** (inclusive of Taxes)
(1) Goods	6.10	100%
(2) Works and non consulting services	42.50	100%
(3) Consultants' Services *(including audits)*	4.00	100%
(4) Training	0.10	100%
(5) Front-end Fee		Amount payable pursuant to Section 2.03 of this Agreement in accordance with Section 2.07(b) of the General Conditions
(6) Interest Rate Cap or Interest Rate Collar premium		Amount due pursuant to Section [2.07(c)] of this Agreement
(7) Refund of preparation advance	0.50	Amount payable pursuant to Section 2.07(a) of the General Conditions
(8) Unallocated	5.00	100%
(9) Retroactive financing*	0.30	100%
TOTAL AMOUNT	**58.50**	100%

- Depending if there is enough money under the PPA remaining. To be checked

Annex 3: Implementation Arrangements

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

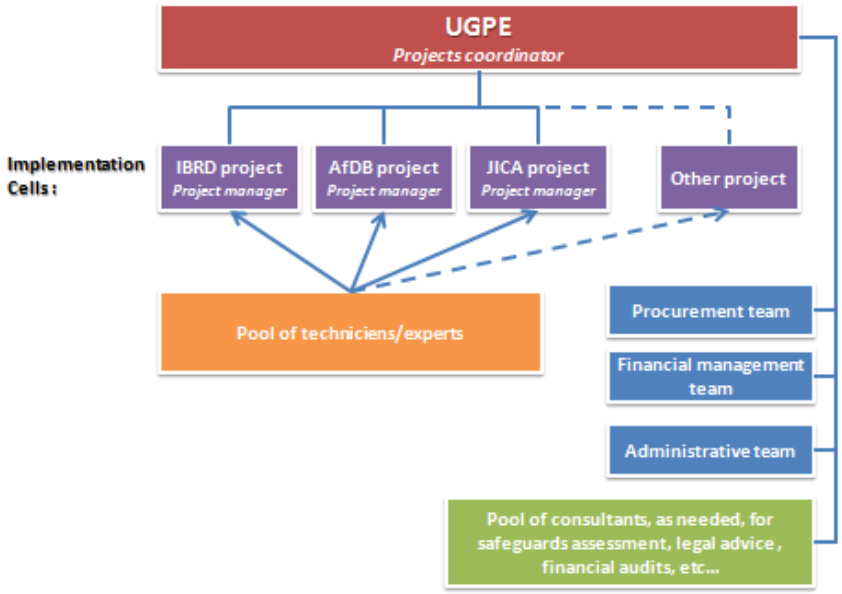
1. A **Project Implementation Unit (PIU**) was established in 1999 to implement an IDA and GEF-financed project (Energy and Water Sector Reform and Development Project). The PIU has satisfactorily carried out its fiduciary and management responsibilities during the implementation of this project. Upon project closing (on December 31st 2009), the GoCV decided to capitalize on the implementation capacity built within the PIU by integrating it into the Directorate General for Energy (DGE) of the Ministry of Tourism, Industry and Energy. Under this institutional arrangement, the PIU, now called Unidade de Gestão de Projetos Especiais (UGPE), has been strengthened in terms of staffing, and is now entrusted with the responsibility of implementing projects from different donors. The PIU currently executes a project co-financed by the AfDB and JICA, and has been selected or is being considered for the implementation of other donor-financed projects including in the transportation sector.

2. The PIU will be responsible for implementing the IBRD project with full fiduciary responsibility. Its Financial Management capacity is adequate to meet the minimum requirements of the Bank. Having implemented a complex IDA-financed complex project, the PIU has a very thorough knowledge of Bank procurement rules and procedures, which would allow for a rapid and smooth implementation of the project. While the PIU will be the sole implementing entity, in operational terms, for the purpose of implementing Components 1 and 2, it will be supported by a dedicated team within ELECTRA, which itself will be supported by the services of a consulting engineering for the control and supervision of the works to be implemented during the project.

3. Within this framework, the PIU shall have responsibility for the day-to-day management of the Project and coordination of project-related activities, including overall responsibility for, *inter alia*: (i) ensuring timely implementation of the Project in accordance with the PIM; (ii) preparing Annual Work Plans and Budgets and annual Procurement Plans; (iii) overseeing Project activities under its direct responsibility and of project-related activities to be carried-out by other entities; (iv) managing Project finances; (v) maintaining consolidated Project accounts; (vi) ensuring adherence to the Safeguard Documents of all agencies involved in the implementation of the Project; (vii) developing and maintaining a system of monitoring the Project key performance indicators; (viii) ensuring coordination among agencies involved in Project implementation, as needed.

4. In order to carry out its responsibilities and effectively implement the various components of the project, the PIU will collaborate with several stakeholders and principally with ELECTRA, with the Ministry of Tourism, Industry and Energy, with the sector regulator ARE and with the Ministry of Finance.

Figure 16: Project Implementation Unit (PIU)



5. ELECTRA will be responsible for:

- Providing technical expertise for the preparation of bidding documents and for bid evaluation for activities under components 1 & 2 of the Project
- Monitoring the implementation of the investments under components 1 & 2. It will be assisted by an owner's engineer to be financed under the project.
- Providing data to the PIU for the monitoring and evaluation of results and outcomes of the project. For some of the indicators under the Performance Contract, it will collaborate with the independent auditor (also financed under the project in Component 3), recruited to monitor the Performance Contract.
- Overall coordination of the project environmental and social safeguards function. For this purpose, ELECTRA will appoint a seasoned environmental and social specialist who will be responsible for overseeing project compliance with environmental and social guidelines and proposed mitigation plans in implementing Component 1 and 2 of the project, in accordance with national and Bank policies and procedures.
- Providing, within six (6) months of the end of its fiscal year, its audited Financial Statements report and auditor's opinion.

6. The PIU shall monitor and evaluate the progress of the Project and prepare Project Reports in form, content and substance satisfactory to the Bank; Report shall cover the period of one calendar quarter and shall be submitted to the Bank not letter than forty five (45) days after the end of the period covered by such report.

7. **Implementation period**: The RRESP is expected to be made effective by March 2012 and to close on September 30, 2016 – 54 months. It is foreseen that physical investments will be rapidly executed (within about 30 months following effectiveness), while the other components notably those related to the restructuring of ELECTRA and improvement in sector's governance, should take a little bit longer than expected.

Annex 4: Operational Risk Assessment Framework (ORAF)

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

Stage: Appraisal

1. Project Stakeholder Risks	**Rating: LOW**			
Description : Consumers: The risk that some potential consumer groups may not support the project because it does not directly profit them or potentially threaten their current situation (e.g. replacing faulty meters by new ones).	**Risk Management :** Strong communication strategy by the PIU and the Regulatory Agency to enlighten consumers about the project and what it may mean to them. Ability of the government to mobilize resources rapidly to expand services and improve quality of service.			
	Resp: ELECTRA, ARE, PIU/MTIE	**Stage:**	**Due Date :**	**Status:**
Municipalities: The build-up of arrears for unpaid public lighting bills may continue as in the past	**Risk Management :** A law has been prepared and should be presented to Parliament this CY to allow ELECTRA to spread the cost of public lighting over its consumer base.			
	Resp: ELECTRA, ARE	**Stage:**	**Due Date :**	**Status:**
Government: The government may waver in its commitment to reform the power and water sectors	**Risk Management :** The government has just been reelected mainly on the basis on its work on economic reform and is on public record for its promises to see it through. Backtracking would be politically difficult and possibly costly, especially in the power sector which is seen as the backbone of the economy and on which important resources have been expended.			
	Resp: MTIE and MF	**Stage:**	**Due Date :**	**Status:**
2. Operating Environment Risk (not disclosed)				
3. Implementing Agency Risks (including fiduciary)				
3.1. Capacity	**Rating: LOW**			
Description : PIU: Capacity of the PIU to implement all the projects in its portfolio	**Risk Management :** The assessment of the staffing and qualifications of the PIU has only shown minor shortage in some skills such as financial management and engineering. PIU has a good track record in implementing Bank supported projects. However, to handle the extra work load that would be created by the project, additional support will be provided in financial management, engineering and environmental and social safeguards.			
	Resp: PIU	**Stage:**	**Due Date :**	**Status:**
ELECTRA: Although technically capable, ELECTRA may not have the necessary skills to implement or monitor the implementation of component 1 of the project	**Risk Management :** The extension of the power stations of Palmarejo and Lazareto will be on the basis of one or two turnkey contracts. In addition, ELECTRA will be assisted by a consulting engineer in the supervision of the work to be financed by the project.			

	Resp: PIU and ELECTRA	**Stage:**	**Due Date :**	**Status:**
3.2. Governance	**Rating: LOW**			
Description : PIU: Changes in the management of the PIU, its structure or functioning, although not foreseen, may have a negative impact on the project	**Risk Management :** The PIU has a shown a remarkable stability in its staffing over a number of years. The government has confirmed that the PIU which implements a number of infrastructure projects financed by other donors, will implement the Bank supported project as well. This adds leverage against disruptive changes which will have, if they were to occur, wide repercussion over a whole portfolio of government projects.			
	Resp: PIU, MTIE	**Stage:**	**Due Date :**	**Status:**
4. Project Risks				
4.1. Design	**Rating: LOW**			
Description : The design of the project is simple, however, the reform component may be complex to implement when set against the technical, financial and administrative capacities of the sector	**Risk Management :** The design is modular and can be easily adapted if conditions warrant such as cost overruns, changes in demand and supply conditions, and priorities, etc The Bank will monitor implementation and agree with the government and the PIU on changes that may be necessary. Furthermore, while the physical component, which represents about 83% of the project, can be implemented without too much difficulty with the assistance of a turnkey contractor. A consulting engineer, the reform component is more complex and would necessitate more time and a more gradual approach. The project will finance a consulting firm to assist the GoCV and ELECTRA in implementing the reform and regular supervision missions will be conducted to Monitor and Evaluate the progress of the reform component.			
	Resp: ELECTRA, MTIE, PIU and Bank	**Stage:**	**Due Date :**	**Status:**
4.2. Social & Environmental	**Rating: MODERATE**			
Description : Social and environmental safeguards may not receive the attention they deserve during implementation	**Risk Management :** An ESMF and RPF (the latter of which has since proven unnecessary, following a technical review, as the project does not trigger OP 4.12) were prepared and disclosed in December 2010. ESIAs for three of the civil works financed by the project were prepared and disclosed in November 2011. The Beneficiary's operational safeguard capacity will be strengthened under the project. In addition, the project will ensure that all contractor bidding documents include environmental and social clauses, whose implementation will be closely monitored by the PIU and the Bank. The reception of completed works will be assessed on the degree to which environmental and social clauses have been implemented by the contractor, among other aspects.			
	Resp:	**Stage:**	**Due Date :**	**Status:**
4.3. Program & Donor	**Rating: LOW**			
Description : The investment program is mostly financed by donors; failure of some of the donors may have an impact on the	**Risk Management :** Ability of the government to mobilize resources rapidly.			

sector recovery	**Resp:** GoCV	**Stage:**	**Due Date :**	**Status:**
4.4. Delivery Monitoring & Sustainability	**Rating: HIGH**			
Description : Sector Reform: There is no guarantee that ELECTRA decentralization will result in better services to consumers at lower cost or that the financial performance of the utility (taken globally) has improved.	**Risk Management :** The implementation of the restructuring of ELECTRA will proceed gradually and with caution so that adjustments could be made in due course should the results prove to be below expectations. A consultancy firm has been recruited to assist the government in fine tuning the reform and helping in its implementation.			
	Resp: PIU, MTIE	**Stage:**	**Due Date :**	**Status:**
Operational risk: The deteriorating fiscal situation may make it more difficult for government to provide the required direct financial support for ELECTRA over the early years of the project, and hence increase operational risks.	**Risk Management :** Close monitoring by the project team (in collaboration with our colleagues of PREM and with the IMF) during implementation and .			
	Resp: GoCV	**Stage:**	**Due Date :**	**Status:**
Financial risks. The project may not attain its PDOs because of the deterioration of ELECTRA's operational performance, especially because of a substantial increase in losses and poor billing and collection	**Risk Management :** The project will finance a technical assistance that will help ELECTRA (i) implement the necessary reforms and (ii) supervise of the work on the extension of the power stations to enable it to improve its financial and technical performance.			
	Resp: PIU, MTIE	**Stage:**	**Due Date :**	**Status:**
5. Project Team Proposed Rating <u>Before</u> Review				
5.1. Preparation Risk Rating: Moderate		**5.2 Implementation Risk Rating:** Moderate		
Comments: Had it not been for the reform component rated high, the project would have been rate low.	**Comments:** Had it not been for the reform component rated high, the project would have been rate low.			
6. Risk Team				
6.1. Preparation Risk Rating: Moderate	**6.2 Implementation Risk Rating:** Moderate			
Comments:	**Comments:** The Risk team concurs with the overall ratings proposed by the task team and agrees that the reform component risks are high. Since this component is of critical importance to the sector's operational and financial recovery the overall risk rating cannot be considered low.			
7. Overall Risk Following Review				
7.1. Preparation Risk Rating: MODERATE	**7.2 Implementation Risk Rating: MODERATE**			
Comments:	**Comments:**			

Annex 5: Implementation Support Plan

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

Strategy and approach for Implementation Support

1. The implementation support strategy is designed to provide assistance to government and other stakeholders to support the implementation of the risk mitigation measures identified in the ORAF and provide the policy, technical, financial, procurement and safeguards advice necessary to facilitate the achievement of the PDO. The IS strategy includes:

a. **Procurement**: The implementation is much facilitated by the fact that about 80% of the project is for one turnkey contract for the extension of both the Palmarejo and Lazareto power stations. The lumping of the two extensions is one package significantly reduces the cost of the kW installed. Given the complexity of the power extension component and the implementation capacity of ELECTRA, it was agreed that a turnkey contract was the best option for implementing it. The Bank will also, as is customary, enforce the rules and procedures relevant to such a large contract (prior review and clearance of bidding documents and prior review and clearance of evaluation reports and awards). More generally, the Bank will provide advice to ensure that all project components are implemented as rapidly as possible consistent with economy and efficiency.

b. **Sector Reform:** The stakeholders would need support in the implementation of the electricity sector reform, a complex undertaking, especially given the nature of ELECTRA's power system dispersed as it is among several small islands and the important issues that have to be dealt with. A firm has already been recruited by the government and the Bank will ensure a close supervision of this component.

c. **Capacity:** At the level of the project management unit, capacity deficiencies have been identified. They will be remedied through the recruitment of the relevant specialists, including procurement, including procurement, financial management and environmental and social management specialists. A computerized accounting system for the project will also be installed.

d. **Fiduciary responsibility:** To ensure accountability for the use of the funds of the project, the audits of the project's accounts have to be carried out periodically by an internationally recognized firm acceptable to IBRD.

e. **Environmental and Social Safeguards:** The Beneficiary's operational safeguard capacity will be strengthened under the project (see c. above). In addition, the project will ensure that all contractor bidding documents include environmental and social clauses, whose implementation will be closely monitored by ELECTRA, the PIU and the Bank. The reception of completed works will be assessed on the degree to which environmental and social clauses have been implemented by the contractor, among other aspects.

Implementation Support Plan

2. The project implementation will be supported by the task team based both in Washington and Dakar. This will ensure that it is possible to field missions rapidly should the need arise. Formal missions will be conducted at least three times during the first year of implementation and twice yearly afterwards. Detailed inputs from the team are given below:

a. **Technical:** The bidding documents will be reviewed by a power engineer. Throughout implementation of the power generation component, a power engineer will participate in supervision missions.

b. **Fiduciary:** The team's financial management specialist shall undertake appropriate training of the relevant staff of the project implementation unit (PIU) to ensure that adequate capacity is available to handle the work load for the project and produce the required project's financial statements. The team's FMS will also oversee the recruitment of an external auditor by the PIU.

c. **Safeguards:** The environmental and social safeguards specialists will participate in all supervision missions during the construction of the power plants at Palmarejo and Lazareto. They will also perform desk work to review environmental and social monitoring reports.

d. **Operations:** Project operation, until project closing, will be followed by the core project team in both Washington and Dakar.

Implementation Support Focus

Time	Focus	Skills Needed	Resource Estimate (Staff Weeks)	Partner Role
First twelve Months	Review of the power construction bidding documents	Power engineer Proc. Accred. Specialist	2 3	
	Review of other project documents (studies, reform support)	Technical specialists	6	
	Environmental and social monitoring	Env. & Social specialists	4	
	Financial management	FMS	2	
	Financial analysis of ELECTRA/ARE	Financial analyst	4	
	Implementation support	ACS	4	
	Team Leadership	TTL	10	
12-51 Months	Power Construction	Power Engineer	8	
	Review of TA outputs/reform support	Technical specialists	6	
	Financial analysis of ELECTRA/ARE	Financial analyst	10	
	Environmental and Social Monitoring	Env. Specialist Social Specialist	6 4	
	Review of Procurement documents	Proc. Accr. Specialist	4	
	Financial Management	FMS	3	
	Implementation Support	ACS	14	
	Team Leadership	TTL	20	

Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Power engineer	10	4	
Financial analyst	14	4	
Env. Specialist	8	4	
Social Specialist	6	4	
Procurement Specialist	7	2	
Technical Specialists	12	4	
Implementation Support	18	1	
Team Leadership	30	8	

Partners

Name	Institution/Country	Role

Annex 6: Investment program

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

1. Cape Verde has made remarkable progress in expanding access to electricity. The number of connections has been tripled in 10 years (1998-2008). However, increased access has not been accompanied by a similar progress in terms of meeting supply and demand balance, operating efficiency, or financial performance, on the part of ELECTRA. Over the last decade, the utility company has experienced financial losses year after year. Judged on the criteria of financial viability, technical and commercial performance, ELECTRA's performance is, in many respects, on a par with utility companies from IDA countries whose economic performance of governance indicators is far inferior to that of Cape Verde.

2. *First Pillar of Government Strategy*. In order to achieve a sustained seven percent annual growth rate, a significant expansion of electricity and infrastructure services is at the heart of the Government's economic transformation agenda. Cape Verde's infrastructure and basic services are under pressure to meet the demands and opportunities of the rapidly growing economy and tourism. In this context, bringing ELECTRA to a point where it does not rely on government direct or indirect support to finance its activities would leave fiscal space for an increase in social services hitherto not available to a part of the population or not available at the required level or intensity, without endangering debt sustainability and growth objectives. Furthermore, a well-managed utility would not only provide better electricity and water services to existing consumers but would also extend these services to populations currently without them. These populations, generally the poorest, would not likely have electricity and water services any time soon, unless the utility is financially strong and able to finance the necessary infrastructure. This is why extending access to the poor can only realistically happen with a utility that stands on its feet and one that does not excessively rely on government support.

3. *Donors support*. In order to help the GoCV in achieving the objectives stated above and overcome the barriers currently hampering the development and reform of the energy sector, a series of investments have been identified by the Donors in agreement with the GoCV and will be carried out over the next short and medium term. Table 15 below shows the aggregate values of planned investments year by year, the overall financial cost of projects already committed (September 2011) and the specific aggregate contribution for the World Bank financed projects.

Table 15: Donors support

Year	Completed	Planned			TOTAL
		2012	2013	2014/2016	
	(in EUR million)				
Overall planned investments	186.07	34.29	68.526	118.92	393.61
Investment committed	206.54 (50%)				
World Bank support (Component 1)	42.5 (10%)				

4. In the electricity sector, the areas of focus for donors investments are: (i) electricity generation additional capacity; (ii) rehabilitation, interconnections improvements, and distribution investments; (iii) enhanced performance and capacity of ELECTRA. Table 16

below outlines the most important investments planned by the GoCV and the other Donors along those categories.

Table 16: Planned investments by GoCV/other Donors

Project	Location	Status	Financing Agencies and cost (in EUR M)	Timeline
Electricity generation – Additional capacity				
Additional generation capacity for the Palmeira power plant	Sal	Feasibility study under realization	AFD (13.17)	Operational by end 2011
Description: Civil works for the extension of the existing power plant building and installation of two additional groups (Fuel 380) of 5.5MW capacity each. *Alignment with sector and ELECTRA support strategy:* Reducing the supply-demand gap on the medium and long term on the Island of Sal, targeting specifically the tourism sector. The project will also improve the decentralization of ELECTRA's generation options and increase the finance viability of the sector by securing additional revenues.				
Additional generation capacity for the Palmerejo and Lazareto power plant.	Praia, Santiago island, and Mindelo, São Vincente island	Project in preparation for World Bank Board of Executive Directors' approval.	World Bank (35.00)	Approval end-2011 and beginning of implementation 2012.
Description: Component one of the Recover and Reform of the Electricity and Water Sectors Project. This component will finance: • Civil works for the extension of the building for the Palmarejo power plant and the installation of two groups of 10 MW capacity each and respective control and service systems. • Civil works for the extension of the building for the Lazareto power plan and installation of two groups of 5.5 MW capacity each and respective control and service systems. *Alignment with sector and ELECTRA support strategy:* Reducing the supply-demand gap on the medium and long term by creating decentralized additional generation capacity, decreasing the pressure on the interconnection network. The project will also reduce the fragmentation of the electricity options and increase the finance viability of the sector by securing additional revenues.				
Construction and installation of four wind farms	Santiago, São Vincente, Sal and Boavista	Contract awarded to VESTA	• EIB (30.00) • ADB (15.00) • FinnFund (8.00) • InfraCo (2.3) • AFC (8.00) • Total cost 63.3	Concluded
Description: The Project consists in the construction of four wind farms with a total installed capacity of 28 MW (of which 10 MW in Santiago, 8 MW in Sal, 6MW São Vincente and 4 MW in Boavista). *Alignment with sector and ELECTRA support strategy:* The project will increase the energy mix available to ELECTRA to satisfy the fragmented demand in the various islands and enhance its capacity to improve the quality and reduce the costs of electricity delivery and production.				

Project	Location	Status	Financing Agencies and cost (in EUR M)	Timeline
Photovoltaic centers and associated back-up systems	Santiago and Sal.	Implementation status.	• Cooperation Government of Portugal (90%) • GoCV (10%) • Total cost 34.21	Concluded
Description : The Project consists in the construction of two photovoltaic stations (installed capacity of 5 MW in Santiago and 2.5 MW in Sal) and two back-up systems of 4.9 MW in addition to traditional diesel back-up systems. *Alignment with sector and ELECTRA support strategy:* Also this project will increase the energy mix available to ELECTRA to satisfy the fragmented demand in the various islands and enhance its capacity to improve the quality and reduce the costs of electricity delivery and production.				
Rehabilitation and reinforcement of production and distributions systems (Project ORET)	Santo Antão, Fogo, São Nicolau and Boavista	Contract awarded.	• OPEC (11.19) • Dutch Gvt Coop. (11.19) • GoCV/ELECTRA (2.13) • Total costs (24.51)	Concluded
Description: Construction of four new power plants on the island of Santo Antão, Fogo, São Nicolau and Boavista, installation fo four new groups of 1.5 MW each in Santo Antão and Fogo and 1 MW in São Nicolau and Boavista. The project also includes the financing and construction of 164 km of 20 KV transmission line, of which 55 km in Santo Antão, 32 km in Fogo, 54 km in São Nicolau and 23 km Boavista. *Alignment with sector and ELECTRA support strategy:* The project contributes to the objective to improve ELECTRA generation capacity and also the technical performances of the electricity systems, in term of reducing transmission losses and improve interconnectivity.				
Interconnections improvements, network rehabilitations and distribution investments				
Emergency Project – Rehabilitation of the MV/LV networks	Praia, Santiago	Contract awarded to MARTIFER	• Cooperation Government of Portugal (90%) • GoCV (10%) • Final cost to be estimated	On going
Description: Rehabilitation of 11 already existing substations, construction of three new substations, substitutions of 10 transformers other equipments and construction of 12 km of underground MV transmission line. *Alignment with sector and ELECTRA support strategy*. The project contributes to the objective to improve the technical performances of the electricity sector, in term of reducing transmission losses and improving interconnectivity.				

Project	Location	Status	Financing Agencies and cost (in EUR M)	Timeline
Rehabilitation of generation, transmission and distribution capacity	Santiago	Contract awarded to WARTSILA for the generation, EFACEC for the substations, CME/MCTV and ELPOR for distribution	• ADB (5.47) • JICA (28.43) • ECOWAS Bank (6.87) • GoCV (3.12) • Total cost: 43.89	End of work: mid 2012
Description: Extension and civil works for the Palmarejo for the installation of two additional groups (installed capacity 11 MW each) and respective control and service equipments, construction of two substations 20 KV/60KV (2x10 MVA each), one in Praia and the other in Calheta de São Miguel, 40 km extension of a transmission line (60KV), double circuit, between the Praia substation to the substation in Calheta de São Miguel, construction of a LV network (20KV) for the distribution network originating from the substation in Calheta de São Miguel to Assomada (16 km) and Tarrafal (22km) and the construction of 130km of underground MV network in Praia, 35km in Assomada, 48 km of LV network in and 21 substations for the rehabilitation and network extension in Praia and Assomada. *Alignment with sector and ELECTRA support strategy*. The project contributes to several objectives for the recovery of the electricity sector. In particular it will improve ELECTRA ability to meet the power demand, improvement of capacity and efficiency and decrease of losses in transmission and distribution networks, improvement of the financial performances including revenue collections.				
Enhancement of distribution networks	Santiago, San Antão, San Vincente, Sal, Fogo and Maio	Economic and financial feasibility study and technical study underway.	• ADB • JICA • Total cost: 44.2	Beginning in 2013 and end of works 2016
Description: Extension and enhancement and rehabilitation of several MV/LV transmission and distribution networks in Santiago, San Antão, San Vincente, Sal, Fogo and Maio. In addition, installation of various systems of protection, control and network surveillances (SCADA systems, communication lines, etc etc) and substitution of 20,200 meters. *Alignment with sector and ELECTRA support strategy*. The project will improve the efficiency of the system and significantly reduce transmission and distribution losses and electricity theft. The overall results will also improve the financial viability of ELECTRA and it capacity to better manage the fragmented electricity system in the country, in addition to provide more reliable power to local businesses and households.				
Construction of Achada de San Filipe substation	Praia, Santiago	Technical study under preparation	• Cooperation Gvt. of Portugal (90%) • GoCV (10%) • Final cost to be estimated	Entry in service 2011/2012
Description: Construction of a 60KV/20KV substation in Achada de São Filipe and the connection network between the new substation and the existing substation in Gamboa. *Alignment with sector and ELECTRA support strategy*. The project will improve efficiency and technical performances of ELECTRA system and insure a more reliable power supply to Praia.				

Project	Location	Status	Financing Agencies and cost (in EUR M)	Timeline
Pilot project – photovoltaic system for street lighting and public building and electrification of areas in Chã das Calderas (environmental protected area in Fogo).	Praia, Paul, Sal and Fogo	Pre-qualification phase.	• Cooperation Government of Portugal (90%) • GoCV (10%) • Final cost 2.15	Concluded
Description: Street lighting for three major roads, installation of micro-generation systems in public building (capacity of 120kW) and installation of 30 PV systems, each one providing electricity to 10 households in the region of Chã das Calderas. Street lighting will also be provided by photovoltaic cellules installed under the project. *Alignment with sector and ELECTRA support strategy*. The project will contribute to increase the energy mix in ELECTRA's generation options and will facilitate access to electricity to areas otherwise excluded from the distribution and transmission networks, like Chã das Calderas.				
Rural Electrification project	Santiago and Fogo	Distribution com	Cape Verde Gov't (8.53 M EUR)	
Description. The project consists in the construction of 225 km of ML and LV transmission lines for the electrification of off-grid communities and 2,500 new connections for vulnerable households. *Alignment with sector and ELECTRA support strategy*. The project will improve access to electricity, in particular for low-income families. It will also foster the development of small businesses in local areas and ameliorate ELECTRA's coverage of costumers the country.				
Enhanced performance and capacity of ELECTRA				
ELECTRA's performance enhancement and recovery plan	Everywhere but with a special attention to Praia (loss reduction program)	Strategy approved and translated through a Performance Contract between the Board of ELECTRA and the GoCV	• IBRD (4) • GoCV (20)	On going
Description. The second pillar in the Government strategy focuses on enhancing ELECTRA's operational performance, and therefore its financial position and operational sustainability. The Government, supported by the consultancy firm Mercados, carried out a comprehensive analysis of ELECTRA's capabilities to achieve a level of performance suitable to receive a credit rating from a reputable international agency. As part of its assignment, Mercados produced a number of studies including a Business Plan, a Financial Plan and an Action Plan to identify the key issues and methodology to address ELECTRA's shortcoming. The assessment concluded that the company was in a critical condition but there were enough reasons to believe that he implementation of a systematic, comprehensive, and challenging plan would result in a complete change in ELECTRA's performance leading to a sustainable and stable situation within about 5 years.				

5. Similarly to the electricity sector, donors will support the GoCV in the water sector, in particular in the context of the improvement of water resources infrastructure and management linked to energy saving and efficiency. Table 17 below outlines the major investment in the sector over the next five years.

Table 17: Major investments in the sector over the next 5 years

Name	Place	Status	Donors	Timeline
Additional water storage capacity	Praia	Project in preparation for World Bank Board of Executive Directors' approval.	World Bank (1.5)	Approval mid-2011 and beginning of implementation 2012.
Description: Included in component one of the Recover and Reform of the Electricity and Water Sectors Project. This component will finance the construction of a water reservoir of about 3,000 cubic meters in order to improve the efficiency of the desalinization process at the plant in Palmarejo. This will allow the desalinization process to be scheduled allowing the process to be carried out outside period of electricity peak demand. *Alignment with sector and ELECTRA support strategy:* This component will improve the efficiency of the electricity sector and ELECTRA's capacity to provide reliable power.				
Capacity expansion of the desalinization plant in Palmarejo (5,000 cubic meters)	Praia	Contract assigned to ACCIONA AGUA	Spanish Cooperation (3.62)	Beginning of works in early 2011 and termination end 2011.
Description: The project consists in the installation of a second desalinization unit of 5,000 cubic meters per day, increasing the production capacity of the plant to 10,000 cubic meters per day. *Alignment with sector and ELECTRA support strategy:* The project sits in the overall objective to improve the technical efficiency of the water sub-sector, by increasing access to quality water at a lower cost.				
Capacity expansion of the desalinization plant in Palmarejo (2x5,000 cubic meters)	Praia	Contract assigned to UNIHA	Austrian Cooperation – Kontroll Bank (5.99)	Beginning of works in 2011 and termination in 2012 for the first 5,000 m3 and in 2013 for the second.
Description: The project consists in the installation of a second desalinization unit of 2x5,000 cubic meters per day capacity, the construction of two reservoirs of 1,500 cubic meters capacity each and rehabilitation of some of the technical components of the Palmarejo plant. *Alignment with sector and ELECTRA support strategy:* The project sits in the overall objective to improve the technical efficiency of the water sub-sector, by increasing access to quality water at a lower cost.				
Extension of the production capacity for the desalinization plant in Palmeira	Sal	Project submitted to AFD and feasibility study in preparation.	AFD (7.26)	Entry in service: 2012
Description: The project consists in the construction and installation of a new desalinization unit of 2x5,000 cubic				

meters per day capacity and the rehabilitation of some of the technical components of the plant. *Alignment with sector and ELECTRA support strategy:* The project sits in the overall objective to improve the technical efficiency of the water sub-sector, by increasing access to quality water at a lower cost.				
Extension of the production capacity for the desalinization plant in São Vincente	São Vincente	Project submitted to AFD and feasibility study in preparation.	AFD (7.26)	Entry in service: 2013
Description: The project consists in the construction and installation of a new desalinization unit of 2x5,000 cubic meters per day capacity and the rehabilitation of some of the technical components of the plant. *Alignment with sector and ELECTRA support strategy:* The project sits in the overall objective to improve the technical efficiency of the water sub-sector, by increasing access to quality water at a lower cost.				

Annex 7: Performance Action Plan

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

A. Context

1. The second pillar in the Government strategy focuses on enhancing ELECTRA's operational performance, and therefore its financial position and operational sustainability. The Government, supported by the consultancy firm Mercados, carried out a comprehensive analysis of ELECTRA's capabilities to achieve a level of performance suitable to receive a credit rating from a reputable international agency. As part of its assignment, Mercados produced a number of studies including a Business Plan, a Financial Plan and an Action Plan to identify the key issues and methodology to address ELECTRA's shortcoming. The assessment concluded that the company was in a critical condition but there were enough reasons to believe that he implementation of a systematic, comprehensive, and challenging plan would result in a complete change in ELECTRA's performance leading to a sustainable and stable situation within about 5 years.

2. The Action Plan was discussed and agreed upon with the Government, ELECTRA and other sector stakeholders in June 2011 and it is aimed at achieving a systematic reduction in losses both technical and non-technical, improve collection and improving the overall quality of the service and financial fundamentals of the company. The Plan is the backbone for a successful restructuring of the sector and includes three levels of actions: (i) strengthening of ELECTRA's Balance Sheet; (ii) enhancing ELECTRA's Short Term Viability; and (iii) consolidating Medium Term Performance. Figure 17 below presents an overall summary of the Plan along those three levels.

Figure 17: Outline of the Action Plan

Mercados: ELECTRA – From recovery to Sustainability – Phase 2 – Action Plan

3. Those studies and the action plan have led to the establishment of target indicators and a benchmarking analysis[8] has been conducted and target values have been set. Then a Performance Contract was developed and signed between the Government and ELECTRA. The agreement rules the relationship between the GoCV and the Board of ELECTRA establishing the roles, responsibility and obligations of the parties regarding the performance of the company and

[8] Two different sets of utilities have been used for performing the benchmark:
- Utilities having similar physical characteristics to ELECTRA: utilities located in islands.
- Utilities having a similar size to ELECTRA: utilities with less than 250,000 customers

the support that the GoCV will provide to make possible the achievement of the performance objectives (as measured by time bound indicators/targets). Those indicators are realistic and based on the studies carried out by Mercados (during Phase 1 of its assignment). The Government commitment is measured by the financial support it will need to inject in ELECTRA to provide the company with enough funds to carry out the needed investment and loss reduction measures included in the Action Plan and achieve a break-even budget in 2015/2016. Attachments 1 and 2 present the targets for ELECTRA and financial commitment from the Government as included in the signed Performance Contract.

4. In addition to signing the Performance Contract, based on the action plan, the Government has developed a two-tier approach to steer ELECTRA towards a sustainable path based on short and medium term actions, as part of the already existing MECOFIS program, aimed at improving ELECTRA's collection rates and addressing non-technical losses.

5. The totality of the short-term actions has now been implemented. The short-term actions focused on improving collection rate and widening the means through which costumers are allowed to settle electricity bills. A specific ELECTRA and Government task-force identified the bottlenecks in the process and identified a series of measures that could have been quickly implemented. Those include the possibility for the consumer to pay ELECTRA's bill on-line at the web-site of the company, at the Casa do Cidadão, a one-stop shop for citizens and business services operating in Cape Verde, commercial bank's ATM's machines (more than 3,000 spread out in the territory), POS payment system allowing ELECTRA's employees visiting consumers to receive immediate payment by credit card. Also, a communication campaign was carried out to increased awareness among citizens on how to settle ELECTRA's bills and to sensibilize them to pay their bill every month instead of the current arrears time of about two or three months.

6. In addition, a large number of medium-term actions have been indentified and they are currently under implementation. Those actions are targeted at specifically fighting non-technical losses and frauds, main objective of the MECOFIS program. The first set of actions includes the geo-referencing of costumers by cross checking ELECTRA's books and the result of the last census, under which each citizen had to declare whether they were connected to electricity. Once the geo-referencing exercise is completed, the second set of actions includes the creation of Electricity Areas to monitor losses more accurately and pin-point potential sources of frauds. A series of distribution investments are also being carried out to ensure a better monitoring of energy flows for each Electricity Area (10,000 additional meter systems were procured recently as part of this program). In addition, a private firm has been recruited, supported by the local enforcement police, to disconnect illegal costumers and immediately reconnect them without penalty.

7. All these actions will complete the already ongoing program of actions such as: (i) investments in network improvement; (ii) use of prepayment meters, introduction of efficient lighting devices (CFLs); (iii) toughening anti-theft laws and improving enforcement; (iv) expanding the MV network therefore making theft much more difficult; and (v) the installation of electronic meters for large consumers.

8. Furthermore, the government is committed to a definitive solution to the persistent problem of non-payment of public lighting by the Municipalities through a legislative proposal to be submitted to Parliament in the next legislative session.

9. The following text summarizes the content of the Action Plan and the main objective is intended to achieve.

B. Strengthen Balance Sheet

10. ELECTRA's financial situation is sufficiently perilous that it is a long way from being able to support any recovery plan. Moreover, ELECTRA's current financial position is weak and has required periodic injections of equity from Government to prevent insolvency.

11. Due to the weak financial position of ELECTRA, putting in place mechanisms to ensure the financial viability of the company during the implementation of the plan is essential, as is support for the activities to be implemented as part of the plan. Annex 9 on ELECTRA's Financial Analysis provides detailed information on ELECTRA financial position and on the GoCV commitments to financially support the utility.

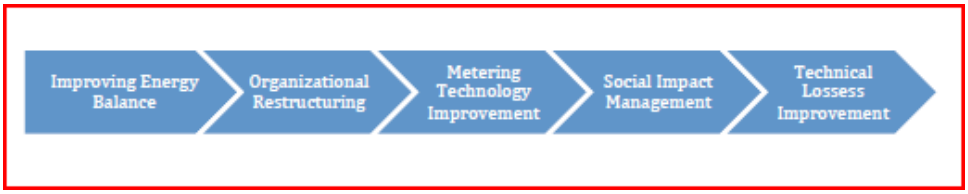
C. Enhancing Short Term Viability

12. It is essential that ELECTRA undertakes some quick and profitable activities in order to stabilize its financial position at the earliest possibility. The studies conducted by the consultant showed that the main problem in the company lies with its commercial and technical energy losses, the rectification of which has to be accorded the highest priority within this action plan. Other important performance shortcomings including the collection of revenue for the provision of street lighting services and easily attainable improvements in the quality of the service are also covered in this first stage of the plan. The sections below outlines a series of actions aimed at addressing these shortcomings.

13. The implementation time frame for this stage is estimated at around 3 years (2012-2014), with the key aim being for ELECTRA to have stabilized its financial and operational performance by the end of this period.

14. **Loss Reduction Plan**. Figure 18 below outlines the different steps part of the Loss Reduction Plan, discussed in details in the sections below.

Figure 18: Loss Reduction Plan



15. *Improving the Energy Balance*. The plan starts by establishing effective auditing and measurement mechanisms so that low-level (feeder) energy balances can be created. This information will be useful for both guiding the field and desk activities and (most important) providing feedback about the results of the actions performed. The proposed Project would cover part of the metering investments required under this part of the plan.

16. *Organizational Restructuring*. The next step involves the rearrangements in the organizational structure to bring the organization closer to the problem. ELECTRA has an organizational structure similar to those in well-established utilities requiring low field intervention. However, ELECTRA requires a more focused approach so that the problem can be

segmented into small pieces. Assignment of responsibilities for those small areas will bring better control and solution of the problems.

17. Commercial and technical losses are the highest in the island of Santiago (mostly in Praia) where half of Cape Verde's electricity demand is concentrated. However, currently almost all commercial staff is located in Mindelo where losses are much lower. According to the company managers, decision-making has traditionally taken place in Mindelo due to the preeminent importance of the city. However, over recent decades economic development in Praia has expanded to such an extent that Mindelo now has a more secondary role in terms of population and energy consumption.

18. The commercial direction, therefore, top responsible for the non-technical losses (major problem in the company so far), must be relocated in Praia in order to supervise, control and monitoring all activities related to the loss reduction. The Government is currently exploring the possibility to separate North and South commercial activities and duplicate the staff in Praia.

19. *Metering Technology Improvement*. An upgrade of available technology is necessary to turn ELECTRA into a modern utility. Implementation of metering technology, systematic grid studies, and Management information systems is necessary to enhance loss reduction capability. The Project will also finance part of the activities under this component of the Plan.

20. *Social Management Impacts*. Management of social impacts is critical in ensuring stakeholder acceptance of, and support for, the loss reduction plan. Loss reduction processes in utilities always involves the two ends of the distribution business, the company and the clients. Considering the second end, the reduction of losses requires that the clients either pay in full for the electricity consumed or on the contrary start activities to reduce consumption so that monthly bills are affordable for them. In whatever case, the activity will represent a shock for the client and can become an issue if it becomes as massive as expected (so that losses can reduce).

21. *Technical Losses Improvements*. Finally, the technical losses, though of secondary priority, must be reduced. Insular networks are usually electrically weak and suffer from voltage drops and load instability. A technical study for loss reduction must be undertaken (along with the quality of the service study) in order to detect the works that are necessary to improve the grid supply efficiency.

22. **Water Losses Control**. The plan also includes recommendation on how to reduce water losses (limited to around 10%). In particular, some of the activities developed for the electricity business (organization restructuring, management improvement, etc) are also useful for the water sector. In this way, the company must perform some activities to introduce changes in the operation to allow the implementation of the improvements. The activities recommended for the short and medium term are as follows: i) consolidate the water balance in the company by installing meters in all principal nodes in the network. It will allow ELECTRA to have a water balance similar to the Energy Balance proposed for the electricity business and ii) ensure the water consumption accurate registering and billing in large customers.

23. **Street Lightning Payment Improvement**. Among the actions to be taken by the company to improve the situation, the following are currently being considered:

- Stake Count: the company must implement an annual stake count of the street lighting. The stake count must include as much details as operationally possible in order to avoid any confusion and/or misunderstanding and allow quick cross checking

of the information. Thus GIS coordinates, city, street, meter to which they are connected, etc must be among the description of each lamp.

- Revision of the overall street lighting energy billing process in order to ensure that all energy in all lamps is properly billed (please consider the calculation of 365 days at 12h each for the flat consumption lamps).
- Creation of a dedicated tax for public lighting. Based on the draft legislation to be submitted to Parliament by the GoCv, a municipal tax for public lighting will be created that will apply to electricity bills.

24. **Quality of the service Improvements.** The quality of the service must be developed in parallel to any loss reduction plan. Customers must understand that the efforts in improving the energy balance must bring about increase in the level of the service provided to the customers. There are several areas where the company can improve the quality of the service:

- Supply reliability due to generation blackouts, where the major problem is due to excessive incidences in the generation plants.
- Supply reliability due to distribution interruptions, where the major problems are not currently known at company's top management due to the lack of proper reporting.
- Commercial service improvement, where there is room for improvement in terms of claims and new connection resolution times.
- Commercial channels improvement, where there is not call center in the company.

25. All aspects above require a solution that must be implemented in general in two main steps. The quick solutions shall show a rapid improvement and a deeper approach afterwards to consolidate the improvements. As part of the Action Plan, the following actions have been identified to address the shortcoming in term of quality of service:

- Real Implementation of the Generation Plants Preventive Maintenance;
- Implementation of quality of the service indexes/assets prioritization;
- Development of a Master Plan for quality of the service improvement (it must include aspects related to technical losses reduction);
- Implementation of OMS;
- Implementation of Call Center; and
- Implementation of Commercial Quality Indexes (Complaints time resolution, and new connections time) by areas.

C. Consolidate Medium Term Performance

26. Medium term activities relate to the activities that must consolidate the company's situation in terms of quality of the service, performance improvement, and balance sheet strength. These activities are to be implemented from the third-fourth to the seventh year. After the implementation of this second stage, the company must be capable of successfully facing a credit rating exercise.

27. *Corporate Strategy*. ELECTRA's transformation represents not only a change in several technological or organizational activities but also a change in how the corporation approaches the new challenges. As per the information collected during the studies preparation, top management is concerned about the staff response and involvement. Additionally, ELECTRA lacks of much modern technological aid for day-to-day performance. The following actions have been envisaged over the medium period to address those challenges:

- Definition of new vision, mission and values and proper internal disclosure;
- Create an e-mail account for all staff;
- Define an internal communication policy (it can start with an periodical internal brochure);
- Development of Management Information System implementation; and
- Implementation of performance linked incentives.

28. *Fuel Price Reduction*. Praia and Sal are currently operating plants with fuel FO180 whereas S. Vicente is operating with cheaper fuel FO380. The difference in price can be as much as 10%-11% in favor of FO380. Considering that Praia currently has the highest fuel consumption (cost for fuel total consumption in FO380 is around EUR 22 million) the company must create the conditions to obtain the cheaper resource in Praia.

29. *Quality of the Service Consolidation*. The results of the Master Plan developed during the short-term measures must be implemented during the consolidation phase.

Attachment 1: Government Financial Commitment to support ELECTRA

30. Attachments 1 presents the Government financial commitment as included in the signed Performance Contract

Economic support to be provided by GCV to ELECTRA, CVE Million

	2012	2013	2014	2015	2016	2017	2018
Action plan Capital Expenditure	500	500	500	500	-	-	-
Additional finance	870	177	-	-	-	-	-
Total support	1370	677	500	500	-	-	-

Attachment 2: ELECTRA Operational Performance Indicators

31. The following table summarizes the objectives for each Performance Indicator and for each year after the implementation of the Agreement. The target value for the Overall Performance Indicator will always be 100% because of the methodology followed for its calculation.

List of performance indicators:

a) Availability Factor (AF)
b) Energy Losses (EL)
c) Collection Ratio (CR)
d) Average Interruption Frequency (AIF)
e) Average Interruption Duration (AID)
f) New connections time MV (NCTMV)
g) New connections time LV (NCTLV)

Indicators targets

	Current Value	2012	2013	2014	2015	2016	2017	2018
AF	85.00	85.75	86.49	87.22	87.93	88.53	88.90	89.00
EL	26.7	23.1	19.0	15.8	13.0	13.0	13.0	13.0
CR	93.08[9]	93.81	94.58	95.40	96.27	97.17	98.10	99.05
AIF	34.64	33.09	31.45	29.78	28.11	26.52	25.02	23.50
AID	69.67	65.23	60.74	56.45	52.45	48.73	45.27	42.00
NCTMV	-[10]	112	109	104	100	96	93	90
NCTLV	-[11]	20	19	18	17	16	15.5	15
OPI	-	100%	100%	100%	100%	100%	100%	100%

Weighting factors for each indicator

Indicator	Weighting Factor	Sign
AF	0.15	+1
EL	0.35	-1
CR	0.20	+1
AIF	0.10	-1
AID	0.10	-1
NCTMV	0.05	-1
NCTLV	0.05	-1

[9] Since the Collection Ratio may include arrears of past years we have taken as current value the average for the last 5 years where data was available (2005-2009).
[10] The current value for this indicator is unknown to the Consultant. The proposed targets are based on internal experience in similar countries.
[11] See footnote 6**Erro! Marcador não definido.** .

32. In term of losses reduction, an alternative, more conservative scenario is also presented below, in which operational recovery takes place at a slower pace. Annex 9 on ELECTRA's Financial Analysis outlines the details and the financial impacts of such more conservative scenario.

	Current Value	2012	2013	2014	2015	2016	2017
EL as defined under the Performance contract	26.7	23.1	19.0	15.8	13.0	13.0	13.0
EL under the more conservative scenario	26.7	24.7	22.0	20.0	18.3	16.3	15.1

Annex 8: ELECTRA Restructuring

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

I - Rationale and Objectives

1. One of the major phenomenon that has contributed to derailing ELECTRA's financial viability for the last five years is the large and widening performance gap between the Northern islands, where ELECTRA management is located (in Mindelo, the second largest city in Cape Verde) and the Southern islands which represent more than half of the customer base. The Southern islands include in particular the island of Santiago and the capital Praia. The rate of total electricity distribution losses in the Southern islands is more than twice as high as in the North and reflects widespread electricity theft concentrated in one part of the country. The absence of an effective management structure in position of responsibility and accountability in the South appears to have been a major contributing factor for the performance divergence within ELECTRA.

2. To address this challenge, as part of the overall sector strategy reform, the GoCV has decided to reorganize ELECTRA on a regional basis, which would involve putting in place a management team in the South, with a large autonomy and minimal technical, commercial and financial reporting. Some functions for which synergies are significant would remain centralized. Following ELECTRA internal reorganization, the ultimate objective of the GoCV would be to maintain the centralized functions within the existing legal entity ELECTRA and to transfer the other functions, operations and assets to two regional subsidiaries.

3. This regional unbundling would appear adapted to the realities of Cape Verde power sector (functional unbundling would not make sense given the absence of interconnection between islands).

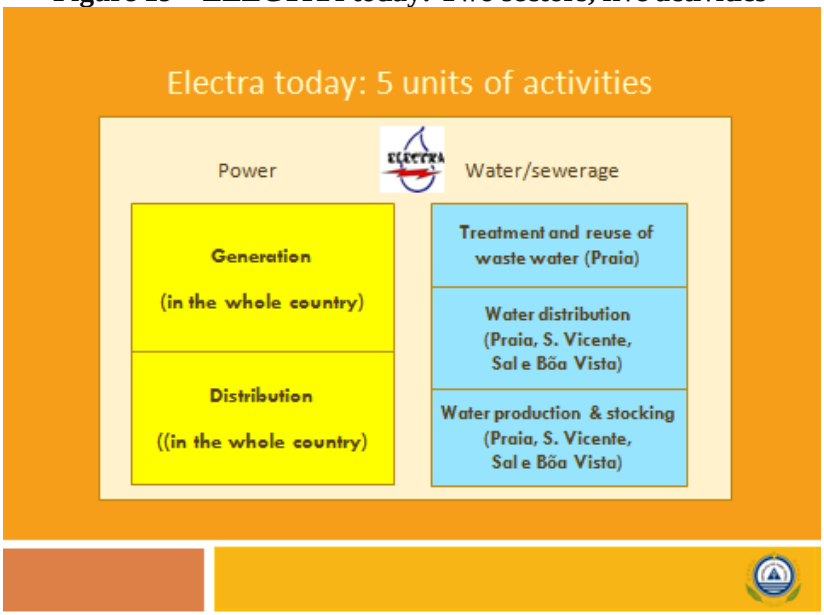
4. The Bank is currently providing technical assistance to Cape Verde for the implementation of this reorganization and would continue to do so during the implementation of the proposed project through one project sub-component.

II - ELECTRA Restructuring Options and Government Choice

5. Today, ELECTRA handles five activities in two sectors (electricity and water). The five activities are generation and distribution of electricity, production and distribution of water and sanitation in Praia. These activities have different constraints and development priorities. The restructuring of ELECTRA is therefore an opportunity to reform the company not only geographically but also along sector lines.

6. The reorganization of the management of ELECTRA is a priority for the government which sees it as an opportunity to improve the technical and commercial performance of the company, especially in the island of Santiago which is the main load center and to promote private sector participation wherever possible.

Figure 19 – ELECTRA today: Two sectors, five activities



7. The third pillar of the Government strategy consists in the reform of the overall electricity and water sector by restructuring and geographical unbundling ELECTRA. Some functions for which synergies are significant would remain centralized. The restructuring of ELECTRA would ultimately result into a new configuration for the electricity and water sectors in Cape Verde. The main actors of this restructuring would be:

- ELECTRA Holding: This entity will determine the policy to be followed by its affiliates and may keep certain activities;
- ELECTRA North: Generation and distribution of electricity in windward (or Barlavento) islands with full management autonomy. Contractual arrangement for billing and collection of water distribution during the reform process.
- ELECTRA South: Generation and distribution of electricity in leeward (or Sotavento) islands with full management autonomy. Contractual arrangement for billing and collection of water distribution during the reform process.

Figure 20 – ELECTRA Power Activities

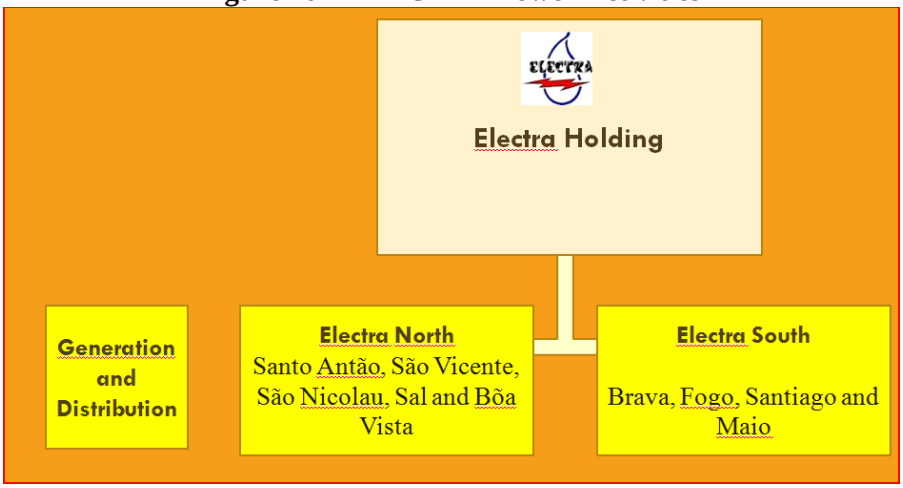
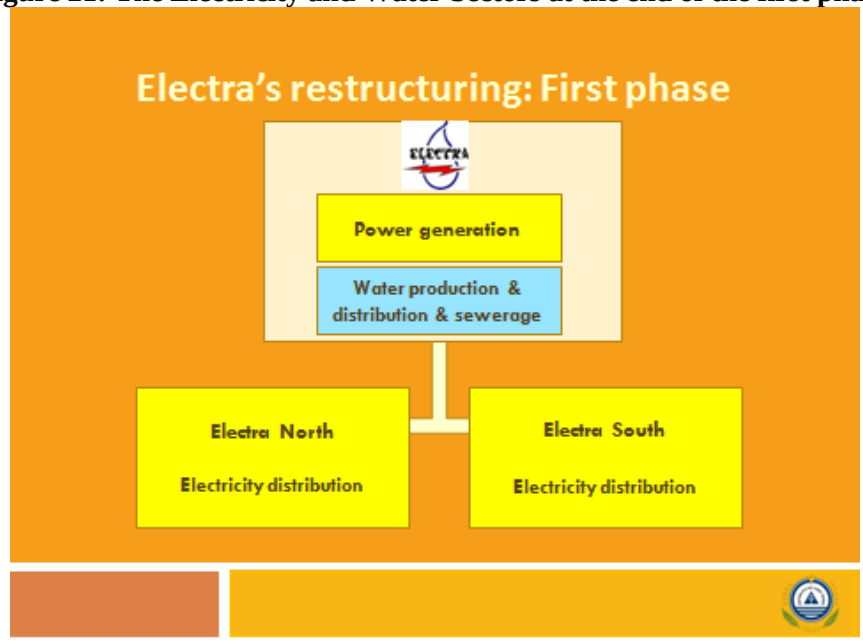


Figure 21: The Electricity and Water Sectors at the end of the first phase



8. Over the long term, the water services and infrastructure will likely be managed by a new company, Aguas de Cabo Verde (ACV), to be established during the reform process. However, the long term setting of the sector institutions is still under consideration by the Government and will be finalized during the work to be carried out by the international consultant advising the Government on the reform and financed by the proposed Project.

9. Over the last year, the Government has already proceeded with the legal creation of the two operating companies, ELECTRA North and ELECTRA South. The Director Generals and Board of the two ELECTRA subsidiaries have been already nominated.

10. ELECTRA North would develop its activities on the islands of Santo Antão, São Vicente, São Nicolau, Sal and Bõa Vista while ELECTRA South would be handling the islands of Brava, Fogo, Santiago and Maio. In Boa Vista, a sub-concession is being planned and a private company (EAB) could handle the distribution of electricity.

11. ELECTRA will transfer to ELECTRA North and ELECTRA South the distribution of electricity under sub-concessions agreements. These agreements will determine the distribution of operating risk as well as the relevant financial conditions. These agreements are being finalized and include personal sharing agreements, lease agreements for the operating assets of electricity and water production, contract for the provision of shared services, contract for the use of personnel, transfer of electricity and water distribution networks, etc. In addition, an international consultant has been already recruited as advance financing of the proposed Project to assist the Government and ELECTRA in designing and implementing the steps to be taken to successfully complete the reform.

12. The government has identified seven critical phases to implement the reform program. After an initial due diligence phase (Phase 1), aimed at analyzing and understanding the current baseline situation, especially in terms of governance, operating model, accounting and information systems, each Step of the reform will be sustained by three different key Phases, as follow and illustrated in Figure 22.

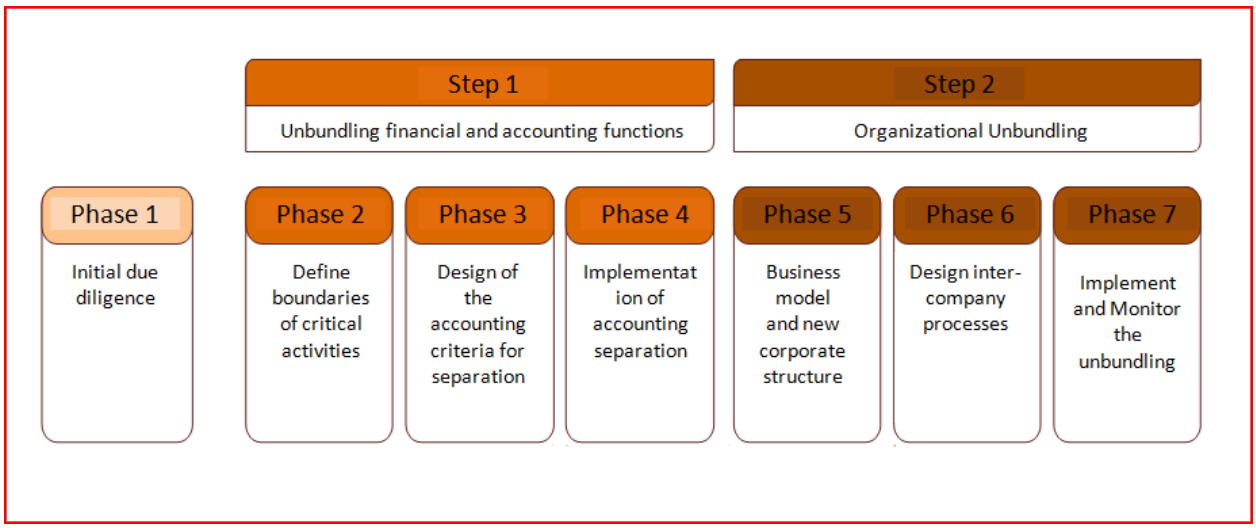
- Step 1: Unbundling financial and accounting functions

  - Phase 2: Define the scope and boundaries for each of the critical identified activities;

- Phase 3: Develop the criteria, processes and accounting systems in order to prepare the accounting separation model and define the basis for implementation;
- Phase 4: Define and monitor the implementation of accounting unbundling model set.

- Step 2: Decentralization of the management and organizational break-up of ELECTRA along sectoral lines
  - Phase 5: Draw the business model and new corporate structure;
  - Phase 6: Design inter-company processes in preparation of organizational separation and set the groundwork for its implementation;
  - Phase 7: Implement and Monitor the defined unbundling model.

Figure 22 – Reform Steps



13. Key activities under Step 1 include:

- Review of the current accounting and Management Information Systems (MIS)
- Accounting separation of activities
- Preparation of opening balance sheets
- Relation protocols between the holding and the affiliates and between the affiliates.

14. Key activities under Step 2 include the actual operationalization of the affiliates. The creation of affiliates has several aspects: technical, accounting and social

- Technical aspects:
  - Identification and inventory of the installations to be transferred to affiliates;
  - Technical and financial appraisal of the installations to be transferred;
  - Identification and inventory of the installations to be removed from service;
  - Identification and inventory of the installations that are common;
  - Identification and appraisal of inventories; and
  - Identification of stocks to be transferred to affiliates.

- Accounting aspects:
  - Examination of ELECTRA's last financial statements;
  - Analysis of all balance sheet items;
  - Identification of all balance sheet items to be transferred to the affiliates;
  - Accounting analysis of common installations (or activities);
  - Opening balance sheets of the affiliates and ELECTRA's balance sheet after transfer of the activities; and
  - Evaluation of the working capital requirements for the affiliates and the holding;
- Social aspects:
  - Analysis of the personnel files;
  - List of personnel to be readily transferred to the affiliates;
  - Legal measures to be put in place for the transfer of personnel; and
  - New pay modalities, including the possibility of putting in place a new salary scale for each affiliate.

15. The transfer will be comprehensive and will involve the distribution of electricity as a separate economic activity including staff management and salaries. During the first phase, the production of electricity, the production and storage of water and the sanitation in Praia will remain with the holding company. The holding company will delegate the metering, billing and collection of water bills to ELECTRA North and to ELECTRA South (this may also include the sanitation in Praia). Personnel management (as already mentioned) is transferred to the affiliates.

16. The reform process will be carried out over the next 18 months and accordingly to the schedule shown in Figure 23 below.

Figure 23: Reform Schedule

Steps		Phases	Months 1 2 3 4 5 6 7 8 9 # 11 # 13 14 # 16 17 18
0	1	Initial due diligence	
1	2	Define the scope and boundaries for each of the critical identified activities	
	3	Desenvolvimento de critérios, processos e sistemas contabilísticos	
	4	Develop the criteria, processes and accounting systems for separation	
2	5	Draw the business model and new corporate structure	
	6	Design inter-company processes in preparation of organizational separation	
	7	Implement and Monitor the defined unbundling model	

Government of Cape Verde and ELECTRA Action Plan

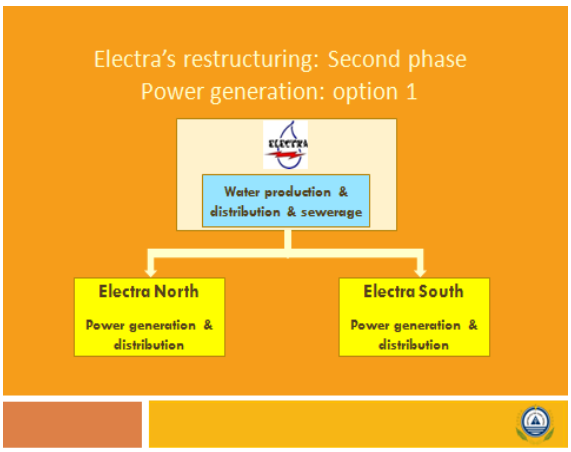
17. The proposed project will support the Government effort by financing the contract of the international consultant in charge of implementing the reform process. In this regard, the procurement as already been concluded as retroactive financing (financing of about 50% of the contract value has been already committed by the Government).

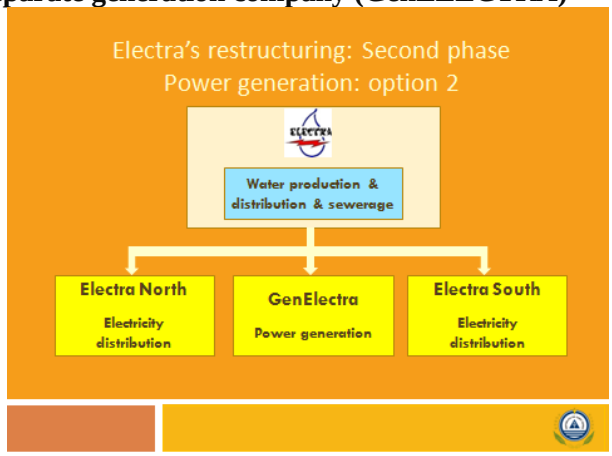
18. ***There are a number of strategic decisions to be taken by the government in the months ahead***. Among these decisions are notably what to do with the services that will stay with the holding company at the end of the first phase of restructuring.

19. ***On production of electricity***: The production and distribution of electricity can be kept together or separated. Given the size of the Cape Verde electricity market, the decision to keep these two activities together is reasonable. Nevertheless, there are important

production deficits especially in Santiago island and tariffs themselves would appear to be sufficiently high to elicit a response from private power producers. Under these circumstances, the creation of a separate profitable electricity production company could be of immediate interest to the private sector. Government or other forms of guarantees will eventually be necessary for electricity purchases from distribution companies. The separation of the production of electricity will be relatively easy as this activity is easily identified. It could be called GenELECTRA. If, however, the government does not want to restructure ELECTRA vertically, then it would be imperative to separate the accounting for generation and distribution and establish them as cost/profit centers. This would allow: (i) to better get a handle on the cost of services; (ii) to target solutions to the right segment of the sector; and (iii) to adjust tariffs to the variable costs of each segment. This is becoming more important with the arrival of new independent power producers.

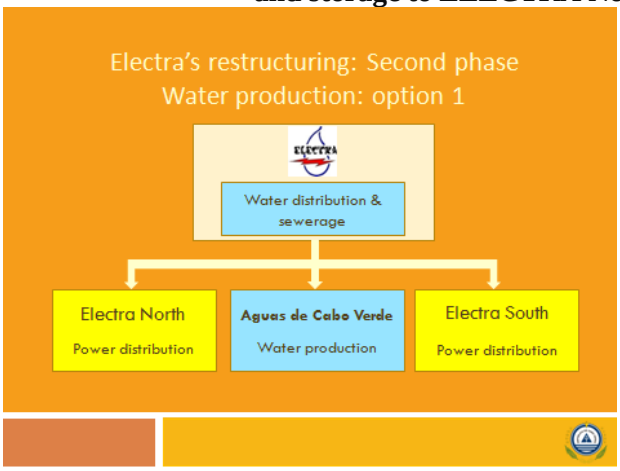
Figures 24 and 25: Generation of electricity is handled by ELECTRA North or ELECTRA South or the creation of a separate generation company (GenELECTRA)

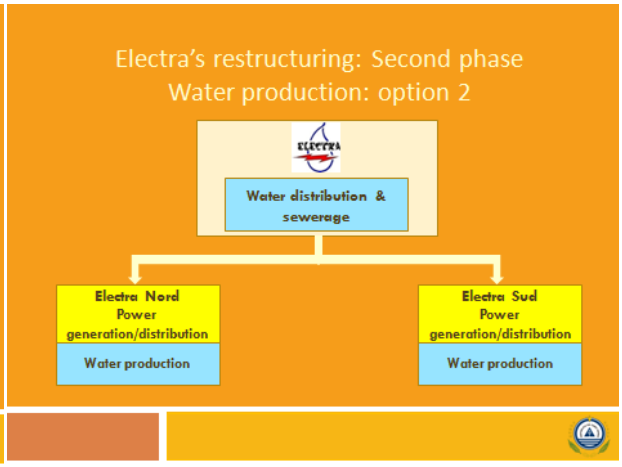




20. ***On Production and Storage of Water***: The situation for the production and storage of water is analogous to that of the generation and distribution of electricity. The level of tariffs, if a handle is to be had on the level of losses, is sufficiently high to attract private sector participation. This will generate new resources for a rapid expansion of service to new consumers and under-served areas. Therefore, it is proposed that a production and storage company be created. This new company could be called Aguas de Cabo Verde (ACV).

Figures 26 and 27: Creation of ACV or delegation of water production and storage to ELECTRA North and ELECTRA South

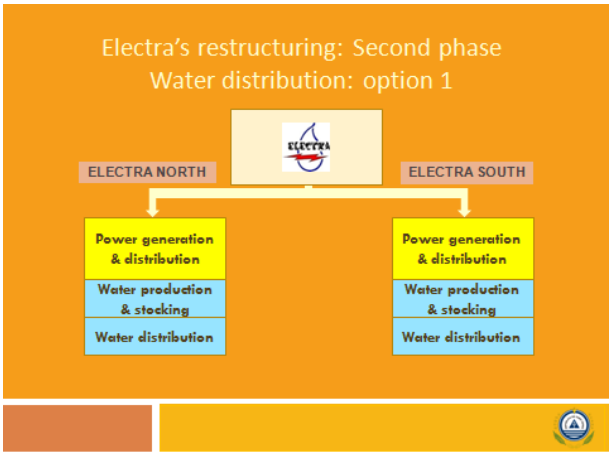


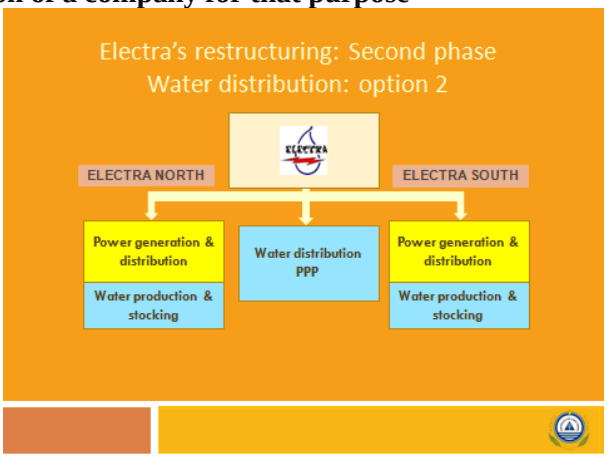


21. ***Distribution of Water.*** The various alternatives open to the government could comprise:

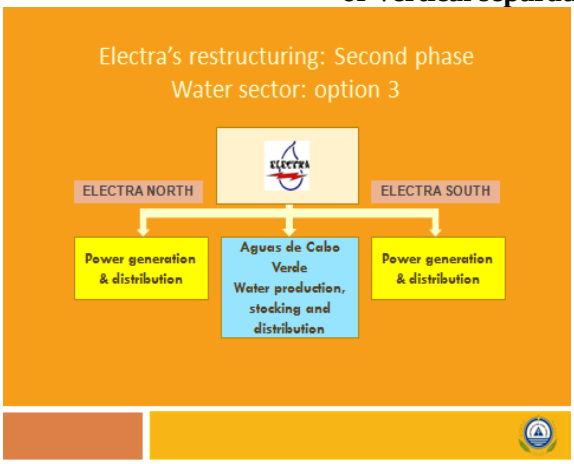
- The constitution of a new water distribution company that could be open to private sector participation via a public-private partnership
- The management of this activity by ELECTRA North and ELECTRA South under an affermage-type arrangement
- The same as above but under a properly designed concession agreement
- The management of this activity by ACV which would then handle all water related activities (production, storage and distribution).

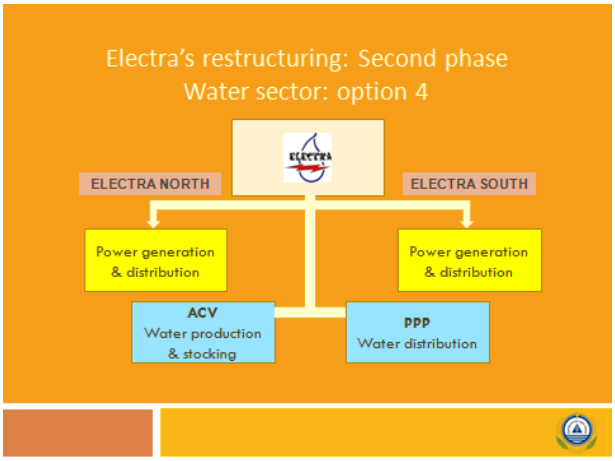
Figures 28 and 29: Delegation of water distribution to ELECTRA North and ELECTRA South or the creation of a company for that purpose





Figures 30 and 31: Delegation of water distribution to ACV or vertical separation of the water sector



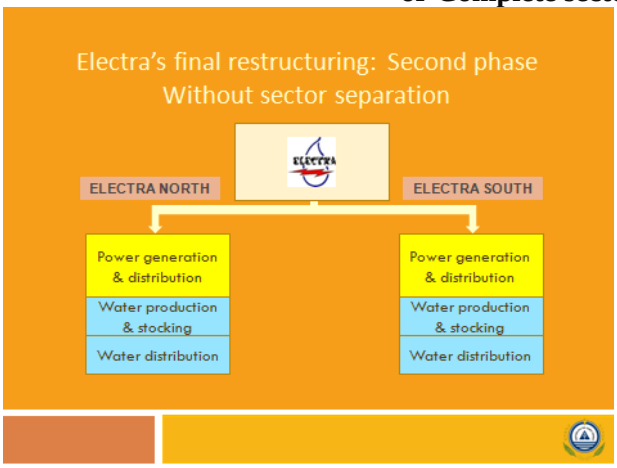


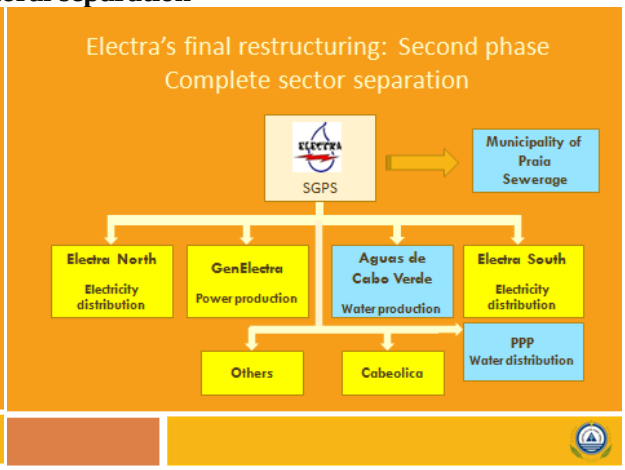
22. The restructuring of ELECTRA would ultimately result into a new configuration for the electricity and water sectors in Cape Verde. The main actors of this restructuring would be:

- ELECTRA holding: This entity will determine the policy to be followed by its affiliates and may keep certain activities;
- ELECTRA North: Generation and distribution of electricity in windward (or Barlavento) islands with full management autonomy. Contractual arrangement for billing and collection of water distribution during Phase 1 of the restructuring of ELECTRA;
- ELECTRA South: Generation and distribution of electricity in leeward (or Sotavento) islands with full management autonomy. Contractual arrangement for billing and collection of water distribution during Phase 1 of the restructuring of ELECTRA;
- GenELECTRA: Would be in charge of generation of electricity all over the country.
- Aguas de Cabo Verde (ACV): Production and storage of water in all islands;

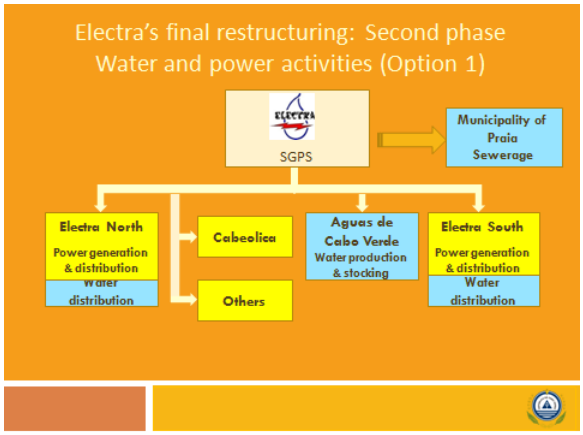
23. The government will decide in due time whether or not to create GenELECTRA and/or ACV, as well as the final layout of the distribution of water. Several possibilities of the final outcome are illustrated below:

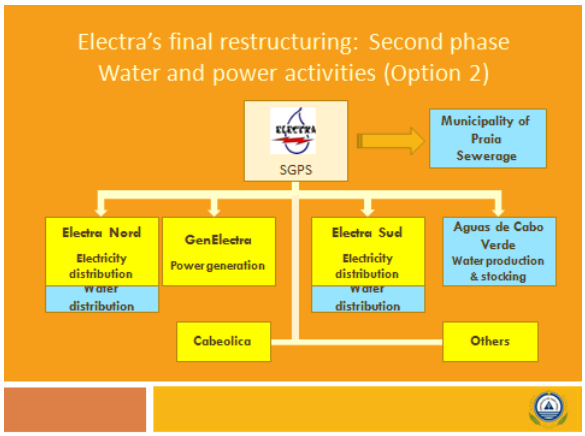
Figures 32 and 33: Extreme options: No sectoral separation or Complete sectoral separation

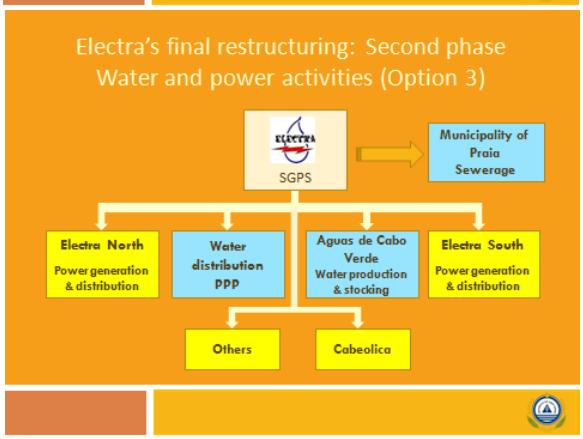




Figures 34 to 37: Intermediate models, with and without the creation of ACV and/or GenELECTRA







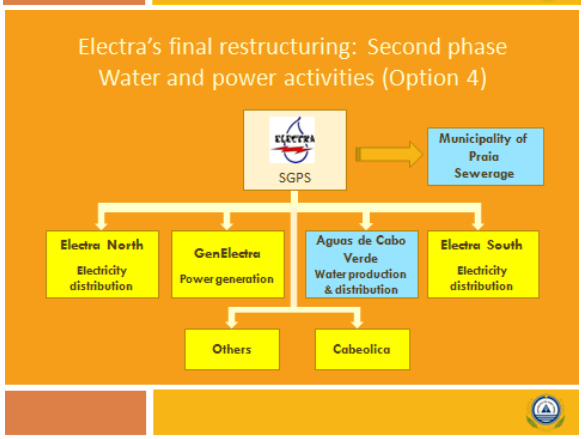
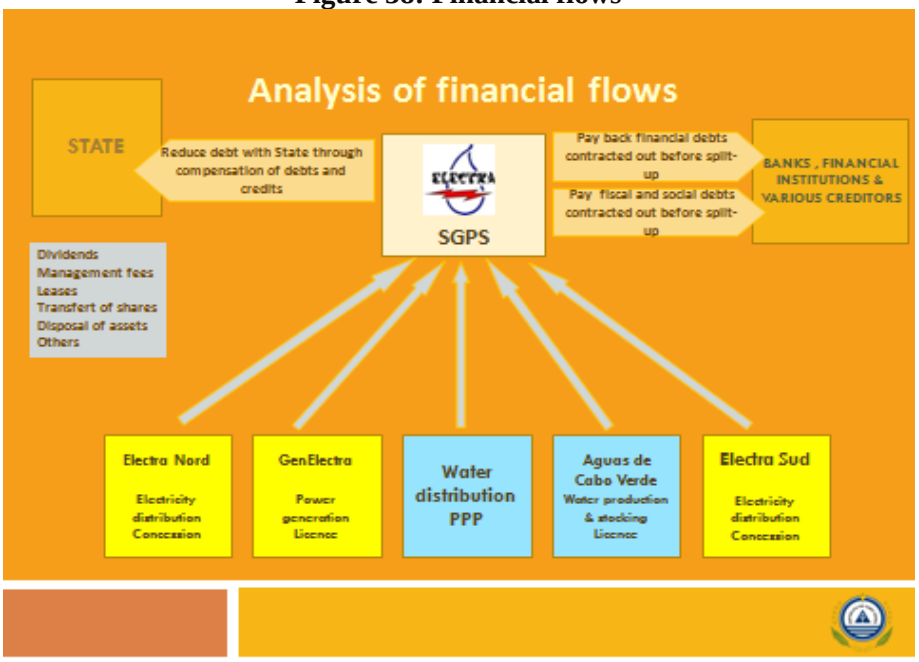


Figure 38: Financial flows



Annex 9: ELECTRA's Financial Analysis

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

1. ***Objectives of the financial analysis***: The main objectives of this financial analysis are: (i) to analyze ELECTRA's recent financial performance; (ii) to assess the financial impact of the recovery plan; and (iii) on the basis of a medium term financial forecast, identify the additional measures that will be needed to restore the financial viability of the utility.

2. ***Key conclusions****:* The GoCV and ELECTRA have already put in place key elements of a workable operational recovery plan for ELECTRA in three areas: (i) investments, (ii) operational and commercial performance and (iii) sector reform (organization of the utility, and tariff regulation).

3. After several years of underinvestment, the ambitious investment program currently planned and for which the financing has been secured, or is close to being secured, would cover the essential medium term needs in power generation, transmission and distribution, and in water production and storage.

4. With regard to operational and commercial performance, the activities programmed as part of the recovery plan (some of them supported by this project) will allow, if adequately implemented, significant reductions in distribution losses. A key condition of success is the support of the GoCV for (i) combating electricity theft and (ii) improving collection from municipalities. The GoCV, by supporting new legislation to secure payment from municipalities, by financing campaigns to disconnect illegal connection, and by stating publicly to public opinion its willingness to address the issue of electricity theft, has demonstrated its commitment.

5. Sector reform: The ongoing reorganization of ELECTRA along a North-South geographical divide will help strengthen managerial presence in Santiago Island where the major issues with commercial performance are located. Also, Cape Verde has made notable progress in the establishment of clear tariff regulation and adjustment mechanisms, adapted to the economic reality of the Cap Verdian power sector. The GoCV has indicated its commitment to cost reflective tariffs and followed through with the tariff increase implemented in April 2011.

6. ***This annex presents ELECTRA Financial prospects over the 2012-2017 timeframe*** based on the implementation of the recovery plan as per the performance contractual plan between the GoCV and ELECTRA's board. ***An alternative, more conservative scenario*** is also presented in which operational recovery takes place at a slower pace. This alternative scenario illustrates the need for continued financial support to ELECTRA during the implementation of the recovery plan.

7. The GoCV has recognized the need to support financially ELECTRA's recovery plan. As part of the contractual plan, it has committed to the provision of financial support to ELECTRA in 2012 and 2013. In addition, the GoCV has agreed to recapitalize ELECTRA in 2012 through a transfer of new assets (for an amount of 20.1 M Euros). This support appears adequate to allow the implementation of the recovery plan for the next two years. A review of the progress achieved should take place in the second half of 2013 to assess if additional support is required.

8. In addition, the GoCV will continue to play a critical part in ensuring that ELECTRA can finance itself over the next 6 years. First, this support will be required to refinance existing debt. Most of ELECTRA's financial debt is currently composed of local bonds with one

tranche maturing in 2012 and another in 2017. In both instances, ELECTRA will not be able to repay this debt with its own cash flow and will need to refinance the bonds, which will require that the investors perceive a credible commitment from the GoCV to support the utility company. Second, the bulk of the investment program will be financed through loans mobilized by the GoCV to be on-lent to ELECTRA. The GoCV will therefore have some latitude to adjust ELECTRA's debt service obligations as required by its financial situation.

Background

9. *ELECTRA has achieved high rates of access in a difficult environment:* ELECTRA is a power and water utility operating in a high cost environment. The company supplies electricity in the entire country (9 islands, 450,000 inhabitants). Within each island, different localities are not necessarily interconnected connected. As a result, ELECTRA currently has 20 different generation sites for a total capacity below 100 MW (not including the wind farms which started to generate in 2011 and developed as an IPP). Event with recent investments in renewable generation (wind and solar), more than 75% of generation will continue to come from engines running on Heavy Fuel Oil (HFO) or Gasoil. Thermal generation will remain the only firm generation capacity available. The geographical configuration of the country contributes to high operating costs (logistic of fuel transportation, spare parts, and personnel). In addition to being the national electricity supplier, ELECTRA is water distributor in four islands including the two most populated cities (Praia, Mindelo). Cape Verde has very limited hydrologic resources. 90% of ELECTRA water comes from desalination which is an energy intensive process. In spite of these challenges, rate of access to electricity in Cape Verde are high in comparison with most SSA countries. ELECTRA had 94,500 electricity customers at the end of 2008, against 29,100 ten years earlier. Over the same 1998-2008 period, the number of water customers has also trebled, going from 9,900 to 32,200.

10. *ELECTRA operating and financial performance has deteriorated significantly since 2005:* The success of the last decade regarding increase in access has not been accompanied by a satisfactory financial performance for the utility. ELECTRA was privatized in 2000 and a consortium in which Electricity of Portugal (EDP) was the major partner took over ELECTRA's management. Under EDP management, significant investments were initially carried out, with a very positive impact on operational performance: increase in sales of electricity and water, cost reductions. However, in a context of rising oil prices, this was not sufficient to prevent ELECTRA from posting significant losses year after year. Disagreements over tariff adjustments soured the relationship between the GoCV and EDP. After 2003, new investments were frozen. Also, ELECTRA commercial performance started to deteriorate with increasing distribution losses, and difficulty with bill collection (especially from municipalities). In 2006, EDP ceded back its majority participation in ELECTRA to the GoCV. Unfortunately, after its reversion to the public sector, ELECTRA's performance continued to deteriorate in 2007 and 2008. In reaction, the GoCV and the utility have undertaken several initiatives. The measures include in particular: i) the mobilization of financing for investments from a variety of donors and financiers, ii) a new tariff regulation regime, iii) increased efforts to combat electricity theft, and more recently iv) a plan to reorganize ELECTRA on a geographical basis.

Table 18: ELECTRA's Income Statement

In EURO Millions	2006	2007	2008	2009	2010
Operating Revenues					
Electricity sales	27.7	33.3	38.2	43.4	47.7
Water sales	8.0	8.3	8.4	9.4	9.6
Sales of associated services	2.2	2.1	2.6	2.6	3.7
Other revenues	0.8	0.5	0.5	0.8	2.0
Total operating revenue	**38.6**	**44.2**	**49.8**	**56.2**	**62.9**
Operating costs					
Direct costs (fuel, energy purchase, materials)	30.0	36.1	37.2	39.6	46.6
Gross Margin	8.6	8.2	12.6	16.7	16.4
Personnel	6.4	6.6	6.7	7.3	7.6
Other cash operating costs	4.6	4.9	4.2	3.1	8.5
EBITDA	**-2.4**	**-3.3**	**1.6**	**6.2**	**0.3**
Depreciation / Provisions for fixed assets	10.1	10.4	10.6	8.7	7.0
Operating Income	**-12.5**	**-13.7**	**-9.0**	**-2.5**	**-6.7**
Financial Income	0.6	0.8	1.0	1.1	0.9
Financial Costs	2.8	3.4	3.9	3.5	3.7
Net Financial Income (costs)	**-2.2**	**-2.6**	**-2.9**	**-2.5**	**-2.8**
Net Income of ordinary activities	**-14.7**	**-16.3**	**-11.9**	**-4.9**	**-9.5**
Exceptional and taxes	33.4	2.3	2.0	0.2	0.0
Net income	**18.7**	**-14.0**	**-9.9**	**-4.7**	**-9.5**

Table 19: ELECTRA's Balance Sheet

In EURO Millions	2006	2007	2008	2009	2010
Long term assets					
Net fixed assets	74.6	76.4	73.7	69.6	64.0
Other Long Term assets	0.7	0.5	0.2	0.1	0.1
Current assets					
Inventories	4.3	5.6	6.6	6.6	6.8
Customer Accounts receivable	15.6	16.2	18.1	27.4	24.4
Other Current Assets	9.4	12.1	8.7	3.0	2.6
Cash and Cash equivalent	0.3	0.8	0.4	0.3	0.3
Total Assets	**105.0**	**111.6**	**107.8**	**106.9**	**98.1**
Equity and assimilated	25.1	15.1	5.0	-1.2	6.9
Long term liabilities					
Long term Financial debt	41.7	52.2	49.0	43.2	44.1
Other Long term liabilities	15.8	13.9	12.5	11.2	3.0
Short term liabilities					
Suppliers	10.3	13.0	13.6	20.9	13.6
Other current liabilities	8.4	9.8	16.2	20.7	17.7
Short term financial debt	3.6	7.7	11.5	12.2	12.9
Total Debt and Equity	**105.0**	**111.6**	**107.8**	**106.9**	**98.1**

Table 20: ELECTRA' S Key financial ratios

In EURO Millions	2006	2007	2008	2009	2010
Profitability					
EBITDA margin (EBITDA in % of revenues)	-6.2%	-7.4%	3.3%	11.1%	0.5%
Operating margin (operating Income % revenues)	-32.4%	-30.9%	-18.0%	-4.4%	-10.6%
Return on Assets (operating income/fixed assets)	-16.8%	-17.9%	-12.1%	-3.5%	-10.5%
Financial Structure					
Current ratio	1.3	1.1	0.8	0.7	0.8
Financial Debt / Equity	1.8	4.0	12.0	-46.9	8.3
Solvency					
Interest Coverage Ration (EBIT Interests)	-4.4	-4.0	-2.3	-0.7	-1.8

Table 21: ELECTRA's Key Technical Indicators

	2006	2007	2008	2009	2010
Generation capacity (MW)	**63**	**66**	**72**	**86**	**91**
Generation (GWh)	**250.9**	**271.8**	**277.1**	**294.2**	**313.6**
Fuel Generation mix (gasoil used / total fuel)	36%	47%	30%	28%	32%
Sales (GWh)	**164.8**	**174.5**	**175.5**	**184.9**	**203.0**
Internal consumption, incl. water production (GWh)	41.0	35.3	46.1	32.5	31.8
Losses (GWh)	45.1	58.8	64.3	76.8	82.3
Electricity Distribution Losses (%)	21.5%	25.2%	26.8%	26.1%	26.2%
average tariff (Euro cents/kWh)	16.8	19.1	21.8	23.3	23.0
Number of electricity customers (000)	82.9	88.2	94.5	104.4	115.5

Key Issues to address as part of ELECTRA Financial Recovery.

11. Schematically, there are four major parameters that determine ELECTRA operating and financial performance:

- Adequate investments to respond to demand for electricity and water and to reduce production costs per unit,
- Achieving an acceptable commercial performance,
- Adequacy of tariff levels and adjustment mechanisms,
- Healthy level and structure of financial debt.

12. *ELECTRA need to invest to reduce its operating costs*: ELECTRA generation costs and water production costs are structurally high but can be reduced significantly with adequate investments. ELECTRA major source of costs is the purchase of fuel which currently represents 75 to 80% of current operating expenses. The condition of the generation equipment (age, status of maintenance) can influence fuel consumption, but the main cost parameter is the type of fuel used. Heavy Fuel Oil 380 (HFO 380) is the least costly fuel used by ELECTRA, followed by HFO 180 (15% more expensive), and Gasoil which is about 70% more expensive with a more volatile price. From 2003 to 2007, largely due to the lack of investments, ELECTRA gasoil consumption increased considerably. This proportion has diminished since but there is significant potential for further cost reduction on this front. ELECTRA also needs to increase its water production capacity which has been stagnant for several years. New desalination equipments, using reverse osmosis, allow a significant reduction in energy consumption (by about 75%) compared to older equipments which ELECTRA still has to use as back-up given it lack of capacity. Also, additional water storage capacity is needed to secure water supply and provide ELECTRA with more flexibility to reduce desalination costs by producing water with the most efficient equipments and when electricity costs are the lowest.

13. *Inadequate commercial performance is ELECTRA's other major weakness*: ELECTRA has also experienced a dramatic deterioration of its commercial performance after 2005. Electricity distribution losses were slightly below 19% in 2004 and 2005. From 2006, they increased significantly three years in a row to 26.8% in 2008 and have remained relatively stable since. This deterioration has been concentrated geographically in the Southern islands, in particular in Santiago which alone represents half of electricity demand. Meanwhile, in the Northern Islands, which include Mindelo, the second largest city in the country where ELECTRA headquarters are located, distribution losses have remained relatively constant and low. In addition to increasing distribution losses, ELECTRA has been experiencing difficulties with bill collection, in particular from public sector users (municipalities). ELECTRA poor commercial performance can in part be attributed to internal organizational issues, including a lack of managerial presence in Santiago Island. It is also related to the context of the capital Praia and to the urbanization of new neighborhoods. Original directives given to ELECTRA to refuse to connect houses constructed without permits have led to a multiplication of illegal connections in some areas. ELECTRA's efforts to reduces losses and improve bill collection needs to be accompanied by support from the GoCV in terms of public communication against electricity theft and law enforcement, and followed by a reconnection of customers with the installation of meters.

14. *Tariff levels and adjustment mechanisms*: The absence of tariff adjustment mechanisms in a context of rising oil prices was the major factor behind the failure of its privatization. After ELECTRA's reversion to the public sector, progress was achieved with regard to tariff regulation. The multisector regulator ARE has authority with respect to tariff setting. Under

existing legislation, tariff regulation should take the form of a price-cap mechanism applicable over a five year period. However, ARE has decided, sensibly, given ELECTRA uncertain situation, to initially put in place initially a three-year tariff formula applicable from 2008 to 2010. The application of this formula has led to a tariff adjustment in 2008 which increased the average tariff and introduced some limited changes in the tariff structure designed to better target the lifeline tariff towards poorer consumers. Also since 2008, ARE has introduced a series of improvement in tariff adjustment mechanisms designed to reflect the changes in the generation mix that cannot be realistically forecast with reasonable accuracy over a five year period and are beyond the control of ELECTRA's management. Tariff regulation in Cape Verde was originally designed around principles that were originally developed in the context of mature distribution utilities in developed countries. The changes introduced progressively by ARE can be analyzed as sensible adaptations to make such a system workable in a different context (integrated utility in a developing country).

15. The revised tariff framework has recently been formalized by ARE and will apply for the 2012-2016 regulatory period. Over the last three years, tariff levels were based on normative performance parameters that ELECTRA was far from achieving especially in the area of distribution losses (the regulatory benchmark for 2011 was 20.1% against an actual level above 26%). As part of the ongoing tariff review, the performance and cost parameters for the next five years will be reset. With regard to commercial performance, ARE has indicated that it will use as benchmarks the performance parameters agreed on between the GoCV and ELECTRA (which will involve initially a revision upwards of the benchmark for distribution losses).

16. *Level and structure of financial debt*: ELECTRA has posted a negative net income from ordinary activities every year since 2000. The company had a positive Net Income in 2006 thanks to an extraordinary gain of 31.9 M Euros related to a reduction of ELECTRA's financial debt. EDP had guaranteed ELECTRA's borrowing for 70 M Euros. When EDP ceded back its majority participation in ELECTRA this debt was refinanced through a local bond issue. As part of the operation, EDP agreed to a substantial reduction in the value of this debt which resulted in an extraordinary gain for ELECTRA and allowed to reconstitute its equity. However, because of accumulated losses since 2006, ELECTRA equity shrunk rapidly and has remained positive since 2009 only through a series of small recapitalizations. Also, ELECTRA short term liabilities have increased (short term financial debt, arrears with suppliers). In addition, ELECTRA is facing the prospect of having to repay in 2012 half of principal of the bond issue that accompanied EDP's departure (repayment amounting to 10 M Euros).

How are the key issues being addressed?

17. *Very significant progress with regard to investment*: The GoCV and ELECTRA have mobilized financing for an ambitious investment program from several different donors (JICA, AfDB, Spanish cooperation, Portuguese cooperation, Netherland-ORET, AFD-France, World Bank IBRD). The investments will be directed towards power generation (mostly thermal based on HFO, with some solar), transmission and distribution networks, water production and storage. The new investments will address the supply interruptions experienced, especially in Praia, for electricity supply and more frequently for water. Increase sales will contribute to improving ELECTRA's margins. They will also contribute to significant cost reductions. In particular, it is expected that by 2012, the proportion of generation with gasoil will cut by four. Only in the three least populated Islands, which together represent less than 5% of electricity demand, would thermal generation remain based primarily on gasoil. The network investments will also help reduce technical losses, improve

reliability of supply and allow a rationalization. In particular, in Santiago Island, four localities which currently have their own power generation equipment will become connected to Praia. This will allow a centralization of generation in the Palmarejo power plant (in which this project is financing an extension of generation capacity). In addition, to the benefit of fuel substitution, the closing of smaller power plants will help reduce other operating costs (personnel, maintenance…). Expansion of generation in Sal and Boa Vista will help increase sales to a profitable market segment (hotels). Overall, ELECTRA investment program, to be implemented over the next five years (2011-2015), will compensate for the lack of investment from 2004 to 2009. Most of the new generation would come online between 2011 and the end of 2013. Water production and storage capacity will also be expanded significantly.

18. The only area which is not adequately covered by current investment plan is water distribution and sewage, for which the responsibility for financing investments lies with the Government. The main water distribution network operated by ELECTRA is in a degraded physical condition, due to the lack of investment and maintenance. Adequate rehabilitation would require large investments. Different institutional options are being considered which would transfer the responsibility for sewage and possibly water distribution to the municipality. Water production would remain under ELECTRA's responsibility given the strong synergy between this activity and power generation.

19. *Development of Renewable*: In addition to the investments to be implemented directly by ELECTRA, the authorities and the utility have taken steps to diversify the generation portfolio with renewable generation. In particular, the GoCV and ELECTRA have entered into an agreement for the development of a 26 MW wind farm project. This project has been developed as an IPP project and has recently come online. Wind power will bring only limited cost reduction for ELECTRA compared to thermal generation (at least for generation with HFO) but reduce the sector exposure to the volatility of oil prices (thereby partially mitigating the impact of future spikes in oil prices). Also, ELECTRA has started to benefit from generation at zero marginal costs from PV equipments (7.5 MW in total, in Praia and Mindelo). The contribution of solar generation will however remain modest given the low average load factor observed (~15%). Solar generation can only make sense for ELECTRA from a financial standpoint with heavily concessional financing (which was the case in this instance). The Portuguese cooperation is financing, mostly as a grant, 10 MW of solar generation (to be located in Praia and Sal). Overall,

20. *Plans to reorganize ELECTRA and to address its lack of commercial performance*: There is a significant performance gap within ELECTRA between the Northern islands, which include the second and third largest consumption centers (Sao Vicente and Sal) and the Southern islands, whose population is largely concentrated in Santiago island. This performance gap has widened since 2005 and is now massive. As an illustration, in the year 2009, distribution losses for Southern islands were at 35% against only 14% for Northern islands. The fact that ELECTRA's management is physically located in Sao Vicente seems to have been a contributing factor behind this widening performance gap which has been left unaddressed for some time. This has led the government to decide on the principle of a reorganization of ELECTRA, along geographical lines. The eventual organizational structure that is currently envisaged would be to maintain ELECTRA as a holding company that would conserve some central functions for which there are significant synergies, and two create two subsidiaries, for the Southern and Northern Islands. An interim stage in the reform process will be to put in place an autonomous management team in Praia for the Southern Islands, and to separate the technical, commercial and financial reporting for the Southern Island. Strengthening the management presence in Praia and putting in place performance

monitoring and accountability mechanisms appears necessary to implement a sustained loss reduction effort in Praia. ELECTRA has put in place teams dedicated to fighting electricity theft which has contributed to a modest loss reduction in 2009 (in contrast with the previous trend which was clearly negative).

21. This project will finance several activities focused on loss reduction, including metering equipments at points of delivery (split prepaid meters to be deployed in the most problematic areas), other metering equipment to be places on the distribution network (so as to better monitor the geographical origin of losses in the distribution network), equipments for the inspection teams in charge of fighting fraud. In addition, the GoCV has stepped up communication campaigns against electricity theft and more recently decided to hire and directly financed subcontractors that will supplement ELECTRA's staff to carry out systematic campaigns of identification and removal of illegal connections. Over the next five years, reverting to a level of losses in Praia that was prevalent five years ago and is currently achieved in the second largest city of the country (Mindelo) does not appear to be an impossible challenge. The support of the authority with regard to law enforcement and public communication will be a significant factor. In addition, action on the part of the GoCV is needed with regard to very poor bill collection from municipalities. In particular, about 3% of ELECTRA's electricity sales go to public lighting and related bills remain for the most part unpaid. This problem cannot be addressed by ELECTRA alone. After considering several options, the GoCV has concluded that new legislation was necessary to solve the issue which will be presented to Parliament during the next legislative session.

ELECTRA's financial prospects during the implementation of the recovery plan

22. ***Financial Forecasts for ELECTRA based on the performance contract***: ELECTRA has prepared a financial forecast for the 2011-2017 period based. The forecast assumes that the performance objectives of the contractual plan will be met. Electricity tariffs and oil prices would remain at their current levels. The key technical parameters for the forecast are presented in Table 22 below:

Table 22: Financial Forecasts for ELECTRA based on performance contract

ELECTRA - Key technical Indicators	**ELECTRA SCENARIO**						
	2011	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Generation (MWh)	**342,788**	**381,200**	**401,368**	**437,604**	**461,885**	**496,444**	**535,854**
Thermal	315,865	286,354	306,129	340,847	368,872	403,430	442,840
Renewable	26,923	94,846	95,239	96,758	93,014	93,014	93,014
Sales (MWh)	216,536	250,614	279,535	318,097	348,824	377,989	410,301
Internal consumption (incl. water production) (MWh)	34,598	42,447	45,618	50,223	53,188	55,944	58,880
Losses (MWh)	91,654	88,139	76,216	69,284	59,874	62,510	66,673
Electricity Distribution Losses (%)	*26.7%*	*23.1%*	*19.0%*	*15.8%*	*13.0%*	*12.6%*	*12.4%*
average tariff (ECV/kWh)	*29.2*	*30.1*	*30.0*	*29.9*	*29.9*	*29.8*	*29.8*
average tariff (USc/kWh)	*35.9*	*36.9*	*36.8*	*36.7*	*36.7*	*36.6*	*36.6*

23. Under this scenario, ELECTRA would experience a significant improvement in operational profitability which would in turn improve balance sheet and solvency indicators, which would start to reach acceptable levels in for 2015 and improve subsequently, as summarized in Table 23 below:

Table 23: Key financial ratios for ELECTRA based on performance contract

ELECTRA - Key financial ratios	ELECTRA SCENARIO						
	2011	2012	2013	2014	2015	2016	2017
Profitability							
EBITDA margin (EBITDA in % of sales)	8.3%	13.9%	20.2%	24.3%	26.7%	30.2%	31.8%
Operating margin (operating Income % sales)	-3.8%	4.3%	8.1%	12.3%	14.0%	18.0%	20.7%
Return on Assets* (operating income/net fixed assets)	-3.8%	2.8%	5.6%	8.5%	9.9%	14.9%	20.2%
Financial Structure and solvency							
Current ratio	0.7	0.8	0.7	0.9	1.2	1.2	1.3
Financial Debt / Equity	NS	4.5	4.3	3.8	3.7	2.4	1.4
Interest Coverage ratio (EBIT/Interests)	-0.7	0.8	1.3	2.2	2.3	3.0	4.1

24. ***Forecast under a more conservative scenario****:* The potential for improving ELECTRA's performance, especially with regard to billing and collection is large. The performance targets under ELECTRA forecasting scenario for distribution losses (under 13%) are not out of reach for a small power system like Cape Verde with limited technical distribution losses. However, the ELECTRA forecasting scenario is extremely aggressive regarding the pace of improvements. In addition, ELECTRA's forecast does not adequately consider the additional risk of loss of revenue from collection losses. An alternative forecasting scenario has been prepared on the basis of more conservative assumptions on these two points as summarized in Table 24 below:

Table 24: Financial Forecasts for ELECTRA based on more conservative scenario

ELECTRA - Key technical Indicators	Conservative scenario						
	2011	2012	2013	2014	2015	2016	2017
Generation (MWh)	**342,788**	**381,200**	**401,368**	**437,604**	**461,885**	**496,444**	**535,854**
Thermal	315,865	286,354	306,129	340,847	368,872	403,430	442,840
Renewable	26,923	94,846	95,239	96,758	93,014	93,014	93,014
Sales (MWh)	216,536	244,514	267,453	299,718	324,067	359,571	396,155
Internal consumption (incl. water production) (MWh)	34,598	42,447	45,618	50,223	53,188	55,944	58,880
Losses (MWh)	91,654	94,238	88,297	87,663	84,631	80,928	80,820
Electricity Distribution Losses (%)	*26.7%*	*24.7%*	*22.0%*	*20.0%*	*18.3%*	*16.3%*	*15.1%*
Additional losses on unrecoverable revenue (%)	*NA*	*4.0%*	*4.0%*	*3.0%*	*3.0%*	*2.0%*	*2.0%*
average tariff (ECV/kWh)	*29.2*	*30.1*	*30.0*	*29.9*	*29.9*	*29.8*	*29.8*
average tariff (USc/kWh)	*35.9*	*36.9*	*36.8*	*36.7*	*36.7*	*36.6*	*36.6*

25. Under this alternative scenario, ELECTRA would require additional financial support during the implementation of the recovery plan. This requirement has been recognized by the GoCV and this support would consist in: (i) providing liquidity to ELECTRA through budget transfers, and (ii) recapitalization by financing of investments. As per the performance contract, the GoCV has committed to budget transfers to ELECTRA totaling 9.5 MEuros (12.5 MUSD) for 2012 and 2013. With regard to recapitalization, the generation and water desalination assets which would be transferred to ELECTRA without the corresponding financial debt would amount to a value of 20.9 M Euros

26. Based on this support, ELECTRA would be able to implement its recovery plan in 2012 and 2013 and see an improvement in its operational performance thereafter albeit at a slower pace than in the ELECTRA scenario. ELECTRA's balance sheet and liquidity position would remain fragile as illustrated by the projected value for the Current and Interest Coverage ratios in 2014 and 2015 as summarized in Table 25 below:

Table 25: Key financial ratios for ELECTRA based on more conservative scenario

ELECTRA - Key financial ratios	Conservative scenario						
	2011	2012	2013	2014	2015	2016	2017
Profitability							
EBITDA margin (EBITDA in % of sales)	8.3%	18.4%	15.9%	18.3%	20.0%	25.9%	28.3%
Operating margin (operating Income % sales)	-3.8%	8.6%	3.4%	5.7%	6.5%	13.1%	16.9%
Return on Assets* (operating income/net fixed assets)	-3.8%	5.6%	2.3%	3.8%	4.4%	10.0%	14.6%
Financial Structure and solvency							
Current ratio	0.7	0.9	0.8	0.9	1.2	1.1	1.1
Financial Debt / Equity	NS	3.7	3.7	3.9	4.1	2.7	1.6
Interest Coverage ratio (EBIT/Interests)	-0.7	1.5	0.5	1.0	1.0	2.1	3.0

27. The financial support to which the GoCV is committed provides satisfactory conditions for allowing ELECTRA to start the implementation of its recovery plan. The financial situation of the utility will however remain fragile and will require close monitoring on the part of the GoCV to ensure that the recovery remains on track nonetheless. Through the financing of its investment program, the GoCV will become the main creditor of ELECTRA. As a result, it will be able to adjust debt service schedule to maintain the financial viability of the utility. A commitment to maintaining the financial viability could take the form of a covenant by which the GoCV would agree to defer capital repayment and waive interests as long as a minimum level of interest coverage is not reached.

Detailed financial forecasts – ELECTRA Group (ELECTRA SARL, ELECTRA Sul, ELECTRA Norte)

A - Performance contract Scenario

A 1- Summary Consolidated Income Statement

ELECTRA - Income Statement	ELECTRA SCENARIO						
In kECV	2011	2012	2013	2014	2015	2016	2017
Operating Revenues							
Electricity sales	6,331,706	7,535,284	8,385,879	9,519,908	10,424,821	11,282,226	12,231,847
Water sales	1,204,429	1,810,587	1,998,156	2,337,580	2,579,513	2,812,431	3,060,295
Sales of associated services	242,177	146,736	146,691	143,075	141,549	140,497	138,938
Other revenues (including operating subsidies)	340,978	19,244	3,325	3,408	3,493	387,563	501,558
Total operating revenue	**8,119,290**	**9,511,851**	**10,534,050**	**12,003,970**	**13,149,376**	**14,622,717**	**15,932,639**
Operating costs							
Direct costs (fuel, energy purchase, materials)	5,864,145	6,134,328	6,350,124	6,962,034	7,440,307	8,027,236	8,695,892
Gross Margin	**2,255,145**	**3,377,523**	**4,183,926**	**5,041,936**	**5,709,069**	**6,595,481**	**7,236,747**
Other operating costs	1,611,277	2,060,264	2,057,394	2,123,512	2,201,961	2,292,382	2,326,281
EBITDA	**643,868**	**1,317,259**	**2,126,532**	**2,918,424**	**3,507,109**	**4,303,098**	**4,910,466**
Depreciation / Provisions for fixed assets	939,656	911,213	1,274,320	1,445,278	1,664,362	1,746,872	1,716,536
Operating Income	**-295,788**	**406,046**	**852,212**	**1,473,146**	**1,842,747**	**2,556,226**	**3,193,930**
Financial Costs	406,426	524,597	658,094	668,741	784,205	850,062	787,973
Financial Income	81,188	287,918	286,638	471,880	470,693	443,431	561,687
Net Financial Income (costs)	**-325,238**	**-236,679**	**-371,456**	**-196,861**	**-313,512**	**-406,631**	**-226,287**
Net Income of ordinary activities	**-621,026**	**169,367**	**480,757**	**1,276,285**	**1,529,235**	**2,149,596**	**2,967,643**
Exceptional and taxes	13,245	95,451	107,312	188,857	356,852	571,555	884,865
Net income	**-634,271**	**73,915**	**373,444**	**1,087,427**	**1,172,383**	**1,578,041**	**2,082,778**

Note: 1 kECV = 9.1 Euros (fixed exchange rate)

A 2- Summary Consolidated Balance Sheet Statement

ELECTRA - BALANCE SHEET	ELECTRA SCENARIO						
In kECV	2011	2012	2013	2014	2015	2016	2017
Fixed assets	**7,705,515**	**14,271,616**	**15,261,916**	**17,419,785**	**18,585,965**	**17,149,781**	**15,822,233**
Current assets	**4,703,782**	**4,858,558**	**5,691,413**	**6,328,689**	**7,961,674**	**8,530,190**	**9,909,310**
Inventories	648,664	613,798	578,931	544,065	544,065	544,065	544,065
Customer Accounts receivable	3,106,678	3,052,151	3,435,243	4,083,546	4,952,130	5,759,654	6,790,676
Other Current Assets	802,028	826,013	826,023	821,367	815,454	799,719	799,719
Cash and Cash equivalent	146,412	366,596	851,216	879,711	1,650,025	1,426,753	1,774,850
Total Assets	**12,409,297**	**19,130,174**	**20,953,330**	**23,748,474**	**26,547,640**	**25,679,971**	**25,731,543**
Equity and assimilated	**1,791**	**2,531,901**	**2,690,579**	**3,536,554**	**4,285,542**	**5,533,203**	**7,325,166**
Financial liabilities	**6,555,407**	**11,502,870**	**11,490,305**	**13,308,873**	**15,712,181**	**13,096,269**	**10,574,526**
Short term Financial debt	1,464,159	1,316,347	1,289,958	263,568	199,022	134,476	69,930
Long term Financial debt	5,091,248	10,186,522	10,200,347	13,045,305	15,513,159	12,961,793	10,504,597
Suppliers	2,484,667	2,498,684	2,882,895	2,864,062	2,594,240	2,787,632	2,994,970
Other liabilities	3,367,432	2,596,719	3,889,550	4,038,985	3,955,677	4,262,867	4,836,881
Total Debt and Equity	**12,409,297**	**19,130,174**	**20,953,330**	**23,748,474**	**26,547,640**	**25,679,971**	**25,731,543**

A 3- Summary Consolidated Cash Flow Statement

ELECTRA - Simplified Cash Flow Statement ELECTRA SCENARIO

In kECV	2012	2013	2014	2015	2016	2017
Cash flow from operations	**530,521**	**3,103,459**	**3,509,936**	**4,011,060**	**3,872,775**	**3,645,029**
EBITDA	1,317,259	2,126,532	2,918,424	3,507,109	4,303,098	4,910,466
Changes in Working Capital	-691,287	1,328,806	1,021,822	1,284,198	508,794	-49,671
Exceptional, Taxes, misc	-95,451	-351,879	-430,310	-780,247	-939,117	-1,215,766
Capital expenditures	**-7,507,114**	**-2,234,819**	**-3,603,147**	**-2,830,542**	**-273,506**	**-348,902**
Financing activities	**7,196,779**	**-384,020**	**1,121,707**	**-410,204**	**-3,022,542**	**-2,748,030**
Net Interest expenses	-236,679	-371,456	-196,861	-313,512	-406,631	-226,287
Net increase/(decrease) in Financial Debt	4,947,463	-12,564	1,318,568	-96,693	-2,615,912	-2,521,743
Capital Injection (inc. asset tranfers)	2,485,996	0	0	0	0	0
Increase(decrease) in net cash position	**220,185**	**484,619**	**1,028,495**	**770,314**	**576,727**	**548,098**

B –"Conservative" Scenario

B1- Summary Consolidated Income Statement

ELECTRA - Income Statement	Conservative Scenario						
In kECV	2011	2012	2013	2014	2015	2016	2017
Operating Revenues							
Electricity sales	6,331,706	7,351,897	8,023,450	8,969,856	9,684,940	10,732,483	11,810,112
Water sales	1,204,429	1,810,587	1,998,156	2,337,580	2,579,513	2,812,431	3,060,295
Sales of associated services	242,177	146,736	146,691	143,075	141,549	140,497	138,938
Other revenues (including operating subsidies)	340,978	889,244	180,325	3,408	3,493	387,563	501,558
Total operating revenue	**8,119,290**	**10,198,464**	**10,348,622**	**11,453,919**	**12,409,496**	**14,072,974**	**15,510,904**
Operating costs							
Direct costs (fuel, energy purchase, materials)	5,864,145	6,134,328	6,350,124	6,962,034	7,440,307	8,027,236	8,695,892
Gross Margin	**2,255,145**	**4,064,137**	**3,998,497**	**4,491,884**	**4,969,189**	**6,045,738**	**6,815,012**
Other operating costs	1,611,277	2,354,340	2,378,332	2,392,607	2,492,509	2,507,032	2,562,484
EBITDA	**643,868**	**1,709,796**	**1,620,166**	**2,099,277**	**2,476,680**	**3,538,706**	**4,252,529**
Depreciation / Provisions for fixed assets	939,656	911,213	1,274,320	1,445,278	1,664,362	1,746,872	1,716,536
Operating Income	**-295,788**	**798,583**	**345,846**	**653,999**	**812,318**	**1,791,834**	**2,535,993**
Financial Costs	406,426	524,597	629,609	650,400	788,887	870,831	847,531
Financial Income	81,188	287,918	286,638	471,880	470,693	443,431	561,687
Net Financial Income (costs)	**-325,238**	**-236,679**	**-342,971**	**-178,520**	**-318,195**	**-427,400**	**-285,844**
Net Income of ordinary activities	**-621,026**	**561,904**	**2,875**	**475,479**	**494,124**	**1,364,434**	**2,250,149**
Exceptional and taxes	13,245	13,245	13,245	13,245	13,245	13,245	13,245
Net income	**-634,271**	**548,659**	**-10,370**	**462,234**	**480,879**	**1,351,189**	**2,236,903**

Note: 1 kECV = 9.1 Euros (fixed exchange rate)

B 2- Summary Consolidated Balance Sheet Statement

ELECTRA - BALANCE SHEET **Conservative Scenario**

In kECV	2011	2012	2013	2014	2015	2016	2017
Fixed assets	**7,705,515**	**14,271,616**	**15,261,916**	**17,419,785**	**18,585,965**	**17,899,781**	**17,322,233**
Current assets	**4,703,782**	**4,858,558**	**5,691,413**	**6,328,689**	**7,961,674**	**8,530,190**	**9,909,310**
Inventories	648,664	613,798	578,931	544,065	544,065	544,065	544,065
Customer Accounts receivable	3,106,678	3,052,151	3,435,243	4,083,546	4,952,130	5,759,654	6,790,676
Other Current Assets	802,028	826,013	826,023	821,367	815,454	799,719	799,719
Cash and Cash equivalent	146,412	366,596	851,216	879,711	1,650,025	1,426,753	1,774,850
Total Assets	**12,409,297**	**19,130,174**	**20,953,330**	**23,748,474**	**26,547,640**	**26,429,971**	**27,231,543**
Equity and assimilated	**1,791**	**3,006,644**	**2,996,274**	**3,458,508**	**3,939,387**	**5,290,576**	**7,527,480**
Financial liabilities	**6,555,407**	**11,028,126**	**11,184,610**	**13,386,919**	**16,058,336**	**14,088,896**	**11,872,213**
Short term Financial debt	1,464,159	841,604	984,263	341,613	545,177	1,127,102	1,367,616
Long term Financial debt	5,091,248	10,186,522	10,200,347	13,045,305	15,513,159	12,961,793	10,504,597
Suppliers	2,484,667	2,498,684	2,882,895	2,864,062	2,594,240	2,787,632	2,994,970
Other liabilities	3,367,432	2,596,719	3,889,550	4,038,985	3,955,677	4,262,867	4,836,881
Total Debt and Equity	**12,409,297**	**19,130,174**	**20,953,330**	**23,748,474**	**26,547,640**	**26,429,971**	**27,231,543**

B 3- Summary Consolidated Cash Flow Statement

ELECTRA - Simplified Cash Flow Statement Conservative Scenario

in KECV	2012	2013	2014	2015	2016	2017
Cash flow from operations	**975,463**	**2,935,727**	**1,607,853**	**1,247,633**	**3,234,255**	**3,989,613**
EBITDA	1,709,796	1,620,166	2,099,277	2,476,680	3,538,706	4,252,529
Changes in Working Capital	-691,287	1,328,806	-478,178	1,215,802	-291,206	-249,671
Exceptional, Taxes, misc	-43,046	-13,245	-13,245	-13,245	-13,245	-13,245
Capital expenditures	**7,477,313**	**2,264,620**	**3,603,147**	**2,830,542**	**1,060,687**	**1,138,988**
Financing activities	**6,722,035**	**-186,487**	**2,023,789**	**2,353,222**	**2,396,840**	**2,502,527**
Net Interest expenses	-236,679	-342,971	-178,520	-318,195	-427,400	-285,844
Net increase/(decrease) in Financial Debt	4,472,719	156,484	2,202,308	2,671,417	1,969,440	2,216,683
Capital Injection (inc. asset tranfers)	2,485,996	0	0	0	0	0
Increase(decrease) in net cash position	**220,185**	**484,620**	**28,495**	**770,314**	**-223,273**	**348,098**

Annex 10: Economic and Financial Analysis

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

1. This section is concerned with the evaluation of the economic benefits of the proposed project especially those of Component 1 dealing with priority investments in the electricity and water sectors. Component 2: Support to Reform and Sector Governance and Component 3. Project implementation and monitoring and evaluation could be broadly assimilated to technical assistance (TA). Technical assistance is less amenable to quantitative analysis but the analysis below gives some indications on the costs and benefits involved.

A. Study of Alternatives for Electricity Generation and Water Storage

1. Electricity

2. HFO fired diesel engines are the most cost effective technology available to bring much needed additional installed generating capacity to the islands of Santiago and Sao Vicente.

3. The island of Santiago will require an additional 2 x 10MW of electricity generation by 2013 to meet the increasing daily max demand loads of the island. Daily maximum demand may become an issue on the island again from as early as 2017.

4. An additional capacity of 5.5MW is required on the island of Saõ Vicente by 2013. A second engine would be required preferably by 2014 or 2015 at the latest.

Alternative Generating Options

5. The availability and reliability of different generating technologies is an important consideration in generation planning. Whereas thermal power plants such as diesel engines generally have a high availability and reliability, wind turbines do not provide firm generating capacity. As a result, while the recently commissioned wind farms in Santiago and Sao Vicente will bring a reduction in fuel costs, they do not bring any reduction in the requirement for additional generation capacity in the two Islands.

6. **Generating technologies:** The generating technologies considered in the analysis are:

- An HFO fired medium speed diesel engine plant
- A distillate fired gas turbine plant
- A coal plant
- A gas fired combined cycle plant (requires new terminal for liquefied natural gas); and
- A wind power plant

7. Electra and its consultants have shown that maximum demand may not be matched by generation capacity by 2013. As a result Electra needs at least 20 MW of new generating plant at Palmarejo and at least 5.5MW at Lazareto to be brought online by 2013. When considering the optimum choice of power generation for Cape Verde, the important factor in the short term is meeting the maximum demand of the islands of Santiago and Sao Vicente. The island of Santiago is already experiencing power outages due to the lack of installed capacity.

8. The critical issue therefore is ensuring a reliable supply of energy to the islands. From the analysis it is clear that the most cost effective means of bringing power generation to the grid in the shortest time possible is with diesel engines or oil fired gas turbines. However, due

to the familiarity of the operators of Cape Verde with diesel engines, and given the high efficiency, reliability and the ability of the engines to adjust quickly to various load requirements, this makes diesel engines the optimum choice for the islands.

9. A cost comparison of the most common types of fossil fuel power generation is shown Table 26 below:

Table 26: Cost Comparison of Alternative Generation Technologies

Generation Technology	Capital Cost US$/kW	Net Efficiency (%)	Availability (%)
Diesel fired diesel engine	994	45	90-95
HFO fired diesel engine	1278	42	85-90
Simple cycle gas turbine - diesel	994	41	85-90
Simple cycle gas turbine - HFO	1207	32	75-80
Combined cycle gas turbine - diesel	1775	55	86-93
Steam plant coal fired	1988	35	82-89

Source: Mott MacDonald: Feasibility Study for the Further Investment in Electricity Generation and Water Storage, September 20, 2011

10. **Fuel diversification:** Although diversifying into using alternative fuels such as liquefied natural gas or coal would help to reduce Electra's exposure to a single category of fuel source (oil products including diesel and HFO), this does not appear to be a technically or economically viable option for the foreseeable future. The initial capital costs of diversifying to alternative fuels such as liquefied natural gas or coal would be too large compared to the size of the Cape Verdean power market (current total generation capacity for the 9 inhabited Islands is around 100 MW). Also, the lead times would be much too long to help address the current and growing shortfall in electrical supply. In this context, the only realistic option for Cape Verde to reduce its exposure to oil price volatility is to increase the share of renewable generation. To do so, wind power is currently the only economic option for Cape Verde. With the recently commissioned wind farms, this potential has been fully tapped. Additional wind generation capacity would become economically justified and technically feasible (from the perspective of network stability) only in a few years if electricity demand continues to grow steadily. However for guarantee of electricity supply, fossil fuel generated power is required and Electra's intentions to convert its existing plant to burn HFO instead of LFO and gas oil, together with the new HFO plants gives Electra the most cost effective and reliable means of electricity generation. In the short term by keeping with the same technology as is currently used ensures that Electra receives a technology that is reliable, cost effective and familiar, with little required in the way of modification to the existing infrastructure.

11. Given the importance of securing additional generating capacity at Palmarejo and Lazareto as early as 2013, the high efficiency and flexibility of diesel engines together with the experience of the operation staff with diesel engine power generation, we conclude that the most cost effective solution to increase the installed electricity capacity of Santiago and Sao Vicente is the procurement of additional HFO fired medium speed diesel engines.

2. Water

Water Storage Tanks

12. Additional 2 x 1500m3 storage tanks are required at Palmarejo to satisfy the increasing demand for potable water on the island of Santiago. Furthermore having 2 x 1500m3 will provide a sufficient buffer to ensure that during unscheduled power outages or

other system failures (e.g. pumping station failure, etc.) that there is enough stored supply of water to meet the island's needs. Several types of tanks were studied in the pre feasibility phase of the project to determine the most cost effective construction. The choice was among the material to be used (steel and reinforced concrete). Reinforced concrete was found to be the most cost effective material for the construction of the water storage tanks. The main economic justification for additional storage capacity is to increase the reliability of water supply. In addition, this extra storage capacity will bring more flexibility to ELECTRA with regard to water production through desalination which is an electricity-intensive process. At the margin, additional water storage will contribute positively to the optimization of power generation.

B. Cost Benefit Analysis of the Electricity Generation Components

13. Estimating the net benefits of the power investments is relatively straightforward. It rests on the total value of the incremental energy supplied to consumers, on the one hand, and capital expenditures and operating costs (including fuel), on the other. The incremental volume of electricity supplied is a function of the new power generating capacity, auxiliary consumption, plant load factor, and transmission and distribution losses. The value per unit of this incremental energy supplied to consumers is estimated based in part on current tariff levels (regular Low Voltage Residential tariffs) and in part of avoided costs of self generation with small diesel engines. The assumptions used are presented in table 27.

Table 27. Value of Incremental Energy supplied (Willingness to pay)

Current Low Voltage Residential Tariffs (excluding lifeline)	ECV/kWH	33.3	**Usc/kWH**	**40.9**
Self Generation Costs with small diesel engines				
Generating effiency	gr/kWh	320		
Current Cost of Gasoil in CV	ECV/kG	112	Usc/kG	137.5
Fuel costs per kWH	ECV/kWH	35.84	Usc/kWH	44.0
Additional Investments and O&M costs (+25%)	ECV/kWH	8.96	Usc/kWH	11.0
Total cost per kWH of self generation	ECV/kWH	44.8	**Usc/kWH**	**55.0**

Average Willingness to Pay	**Weight**	**Usc/kWH**
Current Low Voltage Residential Tariffs	70%	28.6
Avoided self generation costs	30%	16.5
Average Willingness to pay (Usc/kWH)		**45.1**

14. As mentioned earlier, power investments would include: (a) a 2x10 MW HFO diesel generators addition to the existing power station at Palmarejo in Praia (Santiago Island); and (b) a 1x5.5MW addition to the existing power station at Lazareto in Mindelo (Sao Vicente Island).

1. Extension of the Palmarejo Power Station in Praia.

15. Table 28 shows that the revenues from additional power generation capacity depend on three main factors: load factor, transmission and distribution losses, and fuel consumption. Diesel power plants, which can be operated at a high level of capacity utilization throughout the year, will increase the overall load factor. The increase in the relative share of industrial and commercial demand will also help improve the load factor. Nevertheless, at the risk of understating the return to investment, the overall load factor has been assumed to be constant over the period of analysis. The transmission and distribution losses are expected to show some reduction because providing households with meters will help reduce distribution losses and increase the revenues of Electra.

Table 28: Net Revenue from Additional Power Generation Capacity at Palmarejo

Net Revenue from Additional Power Generation Capacity at Palmarejo			2012	2013	2014	2015	2016	2017	2022	2027	2032
Generation Capacity	**20**	**MW**									
Capital Cost	**31.4**	**$Million**	9.42	15.7	6.28						
Maximum Generating Capacity		**GWh**			175.2	175.2	175.2	175.2	175.2	175.2	175.2
Plant Load Factor	**57%**										
Actual Generation		**GWh**		0.00	99.86	99.86	99.86	99.86	99.86	99.86	99.86
Auxiliary Consumption	**4%**										
Additional Energy Injected		**GWh**		0.00	95.87	95.87	95.87	95.87	95.87	95.87	95.87
Technical T&D Losses	**15%**										
Net Additional Electricity Supplied		**GWh**		0.00	81.49	81.49	81.49	81.49	81.49	81.49	81.49
Value of Net Additional Supply ($Million)	**0.451**	**$/kWh**		0.00	36.75	36.75	36.75	36.75	36.75	36.75	36.75
Operating Expenses					1.20	1.20	1.20	1.20	1.20	1.20	1.20
I) Generation (% of Capital cost)	**3.00%**	**of K Cost**			0.60	0.60	0.60	0.60	0.60	0.60	0.60
ii) Transmission (% of Capital costs)	**1.00%**	**of K Cost**			0.20	0.20	0.20	0.20	0.20	0.20	0.20
iii) Distribution (% of Capital costs)	**2.00%**	**of K Cost**			0.40	0.40	0.40	0.40	0.40	0.40	0.40
iv) Cost of fuel											
- Fuel Consumption	**210**	**gr/kWh**			20.97	20.97	20.97	20.97	20.97	20.97	20.97
- Cost of fuel oil (HFO 380)	**773**	**$/ton**			16.21	16.21	16.21	16.21	16.21	16.21	16.21
Net Revenue		$Million	-9.42	-15.70	13.06	19.34	19.34	19.34	19.34	19.34	19.34

NPV @	**10%**	**$107.45**	**Million**
IRR		**56%**	

Switching Values (*)		
Capital cost increase	340%	cost overrun
Plant load factor	14%	
Price of Fuel	1510	US$/ton

(*) If the selected parameters reach the values indicated, the NPV will equal zero

2. Extension of the Lazareto Power Station in Mindelo

16. Table 29 shows the results of the analysis for the Lazareto Power Station extension with the addition of a 1x5.5MW HFO fired diesel generator.

Table 29: Net Revenue from Additional Power Generation Capacity at Lazareto

Net Revenue from Additional Power Generation Capacity at Lazareto			2012	2013	2014	2015	2016	2017	2022	2027	2032
Generation Capacity	**5.5**	**MW**									
Capital Cost	**12**	**$Million**	3.6	6	2.4						
Maximum Generating Capacity		**GWh**			48.18	48.18	48.18	48.18	48.18	48.18	48.18
Plant Load Factor	**57%**										
Actual Generation		**GWh**		0.00	27.46	27.46	27.46	27.46	27.46	27.46	27.46
Auxiliary Consumption	**4%**										
Additional Energy Injected		**GWh**		0.00	26.36	26.36	26.36	26.36	26.36	26.36	26.36
Technical T&D Losses	**15%**										
Net Additional Electricity Supplied		**GWh**		0.00	22.41	22.41	22.41	22.41	22.41	22.41	22.41
Value of Net Additional Supply ($Million)	**0.451**	**$/kWh**		0.00	10.11	10.11	10.11	10.11	10.11	10.11	10.11
Operating Expenses					0.30	0.30	0.30	0.30	0.30	0.30	0.30
I) Generation (% of Capital cost)	**3.00%**	**of K Cost**			0.12	0.12	0.12	0.12	0.12	0.12	0.12
ii) Transmission (% of Capital costs)	**1.00%**	**of K Cost**			0.06	0.06	0.06	0.06	0.06	0.06	0.06
iii) Distribution (% of Capital costs)	**2.00%**	**of K Cost**			0.12	0.12	0.12	0.12	0.12	0.12	0.12
iv) Cost of fuel											
- Fuel Consumption	**210**	**gr/kWh**			5.77	5.77	5.77	5.77	5.77	5.77	5.77
- Cost of fuel oil (HFO 380)	**773**	**$/ton**			4.46	4.46	4.46	4.46	4.46	4.46	4.46
Net Revenue		**$Million**	**-3.60**	**-6.00**	**2.95**	**5.35**	**5.35**	**5.35**	**5.35**	**5.35**	**5.35**

NPV @ 10%	**$26.94**	**Million**
IRR	**42%**	

Switching Values (*)		
Capital cost increase	220%	cost overrun
Plant load factor	18%	
Price of Fuel	1400	US$/ton

(*) If the selected parameters reach the values indicated, the NPV will equal zero

17. The NPV of the Lazareto extension is positive and the switching values show that the results are robust and that the project is able to withstand important shocks.

C. Financial Cost Benefit Analysis of the Electricity Generation Components

18. The financial return on investment for ELECTRA would be lower than the Economic return given that average tariffs per kWh are lower than the consumers' willingness to pay. Nonetheless, the financial justification for the investment is very robust, because it will help ELECTRA switch from old and inefficient engines based on diesel to new engines running on HFO. With current oil product prices in Cape Verde, the fuel cost of generation per kWh are around 30, 19 and 17 USc per kWH with respectively diesel, HFO 180, and HFO 380. The savings from fuel switching will be considerable. If one assumes that the minimum acceptable financial rate of return on investment for ELECTRA is 10% on the first year of operation, this return would be achieved for Palmarejo power station through savings on fuel costs by switching to HFO 180 if the annual load factor reaches 16%. If from the start HFO 380 is available, the minimum load factor to justify the investment from year 1 would be only 14%.

Component 2, 3 and 4. Improvement in Electra's performance, institutional reform and Project implementation and monitoring and evaluation

19. For the most part it is not difficult to measure the costs of components 2, 3 and 4 (assimilated to TA components) as they are part of the project cost. Some elements of these three components are to be provided by the government, and there may be some challenge to obtaining the economic value of the funds provided. The most difficult measurement on the cost side is the opportunity cost of senior Cape-Verdian officials involved in the preparation, negotiation and implementation stages of the project. Nevertheless, the true challenge is on the benefit side. In practice, it is rare that any attempt is made at quantitative analysis in project appraisal. Generally, this is so because while the costs of the project are generally well known, the benefits are more diffuse and it is difficult to assign a monetary value to them. Any attribution of benefits, if they could be measured, to the proposed project can only be arbitrary. Accordingly, one must be cautious when assigning values to outputs which have only a tenuous link to impacts. In the evaluation of the TA components of the proposed project, only a qualitative assessment could be offered.

20. Component 2 will reduce costs directly because of the increased efficiency of ELECTRA through improved system technical and financial performance, and consumer responsiveness. It also will lay the basis for a series of measures to enhance the sustainability of investments undertaken by ELECTRA and its ability to provide and expand services, especially through the analysis of financial sustainability of ELECTRA, including a restructuring plan, tariffs and subsidies and development of a strategy for commercial operations. The proposed project also addresses the issue of governance at the firm and sector levels which is paramount for accountability and good management of public sector assets.

21. Component 3. Support to Reform and Sector Governance: When implemented, this component should directly contribute to the reduction of costs because of the increased efficiency in the choice of investments by ELECTRA and the pressure to reduce costs, improve system reliability and consumer responsiveness, exerted by the regulatory oversight of ARE. This component will also lay out the basis for a series of measures to enhance the sustainability of investments undertaken by ELECTRA and its ability to provide and expand services, especially through measures to enhance its financial sustainability, including a restructuring plan, tariffs and subsidies and the development of a strategy for commercial operations. The proposed project also addresses the issue of governance at the firm and sector levels which is paramount for accountability and good management of public sector assets.

22. Component 4. Project implementation and monitoring and evaluation: This component will help in the smooth implementation of the project, including the financial, environmental and social safeguards.

Annex 11: Financial Management and Disbursement Arrangements

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

A. Introduction

1. This annex summarizes the findings of the financial management capacity assessment for the Ministry of Tourism, Industry and Energy (MTIE) during the project preparation. A financial capacity management assessment was carried out during project preparation in accordance with the Financial Management Practices Manual issued by the Financial Management Board on November 3, 2005. The objective of this assessment was to determine whether the MTIE has acceptable financial management arrangements to ensure that: (i) the funds will be used only for the intended purposes in an efficient and economical way; (ii) accurate, reliable, and timely periodic financial reports are prepared; and (iii) the entity's assets are safeguarded**.**

2. The conclusion of this assessment is the MTIE through the PIU has the minimum condition to manage IBRD funds of the Recovery and Reform of the Electricity Sector Project.

B. Summary of the project design and implementation arrangement

3. The objectives of the Recovery and Reform of Electricity Sector Project is to meet the electricity and water supply needs of the country in an economically and environmentally sustainable manner in order to contribute to economic growth and well-being of the population of Cape Verde and to improve the governance of the sector and the technical and financial performance of ELECTRA. The project would include the following four main following components:

- Priority investments in electricity and water;
- Support ELECTRA's lost reduction plan;
- Support ELECTRA's reform and sector Governance
- Project implementation and monitoring and evaluation

4. This project will be implemented by a Project Implementation Unit (PIU) recently integrating into the Directorate General for Energy (DGE) of the Ministry of Tourism, Industry and Energy. The PIU was established in 1999 to implement an IDA and GEF-financed project (Energy and Water Sector Reform and Development Project). The PIU has satisfactorily carried out its fiduciary and management responsibilities during the implementation of this project. The Fiduciary Unit of the PIU will manage the funds under the Recovery and Reform of Electricity Sector Project.

Country Accountability Issues

5. The Country Financial Accountability Assessment (CFAA) of Cape Verde was conducted in June 2003. The overall risk rating of the public financial management system was substantial. Since that exercise, the Government has created a Unit under the Ministry of Finance to monitor the implementation of the CFAA action plan. Actions have been implemented and the Assessment made by the donors including the Bank since

2005 showed significant improvements in the areas of public expenditure tracking, notably external control and budget preparation which was the priority area defined in the PRSP. A PEFA exercise was conducted in 2008. Results confirmed that public finance management reforms are on track and yielding positive outcomes. Weaknesses were identified in oversight of fiscal risk, internal audit, provision of information on donor-funded projects and medium term budgeting and planning and significant progress is still needed in internal controls and the implementation of public chart of account in the integrated and comprehensive accounting system (SIGOF).

Risks Assessment and Mitigation Measures

6. Table 29 below gives a summary of the risk assessment and mitigation measures to be implemented:

Table 29: Summary of Risk Analysis and mitigation measures

Risk	Risk Rating	Risk Mitigation Measure	Conditionality	Residual Risk Rating
I. Inherent Risks:	**Modest**			**Modest**
1. Country: Some constraints in the budget cycle and economical vulnerability due to the geographical configuration of the country.	**Modest**	The updated action plan of the PEFA is being prepared in order to take in account all the recommendation made in this exercise. The good governance maintains a fragile economical sustainability.		**Modest**
2. Entity Levels: MTIE has human resources and capacity to manage the new project	**Modest**	The project will be ring fenced by the PAU under the PIU recently created in the MTIE.		**Modest**
3. Project level:	**Modest**	An adequate financial management system will be implemented in order ensure that the funds are used only for the intended purposes in an efficient and economical way and the preparation of accurate, reliable, and timely periodic financial reports.		**Modest**
II. Control Risks:	**Modest**			**Low**
1. Budgeting				

Weakness in the monitoring of budget	**Modest**	Budget execution to be monitored through quarterly Interim Financial Reports.		**Low**
2. Accounting				
The existing manual doesn't take in account the new project and the new institutional arrangement.	**Modest**	The existing Administrative and Accounting manual of procedures is being updated in order to host the new project and to take into account the new institutional arrangement of the MTIE.		**Low**
3. Internal Control & Internal Auditing				
Lack of internal audit functions in the PAU.	**Modest**	The Financial Procedures Manual will be updated to include key accounting and internal control procedures.		**Low**
4. Funds Flow				
	Modest	A segregated designated account will be opened in the central bank (BCV) in terms acceptable to the Bank, to track the project expenditures.		**Low**
5. Financial Reporting				
Capability to prepare and submit quarterly financial reports (IFRs), since submission of IFRs was not required in the previous project	**Substantial**	Quarterly un-audited Interim Financial reports will be submitted to the World Bank within 45 days of the end of each quarter. The quarterly IFRs format and content will be agreed during Negotiation.		**Modest**
6. Auditing				
	Modest	Independent external will be appointed based on TOR acceptable to the Bank.	No later than 4 months after effectiveness	**Low**
Overall Risk	**Modest**			**Low**

7. Considering all these factors the overall residual Risk for the Recovery and Reforms of Electricity Sector Project in Cape Verde has been assessed as "**Low**".

Strengths

8. The strengths of the project include (i) a computerized accounting and financial management information in place; (ii) an accounting and financial manual available and (iii) the experience accumulated by the FMS in the management of the World Bank financed project.

Weaknesses and Action Plan

9. Some issues in the financial aspects were identified during the preparation of the project notably: (i) the need to recruit an assistant accountant; and (ii) the lack of external auditor.

Table 30: Action Plan of the Recovery and Reform of the Electricity Sector Project

Action	Responsible Body	Completion Date
▪ Recruitment of Accountant assistant	▪ PIU	▪ Three months after effectiveness
▪ Appointment of the auditor.	▪ PIU	▪ Six months after effectiveness

SPCU – Financial Management Arrangement

Staffing Arrangements

10. The Financial Management Specialist (FMS) of the previous project (Energy, Water and Sanitation Program) has relevant experience in accounting, auditing, disbursement and financial management procedures of IBRD. He should be supported by an accountant assistant who will be recruited on a competitive basis.

Budgeting

11. The annual budget will be based on an agreed annual work program, annual procurement plan and closely monitored during implementation. This budget will be incorporated in the national budget. The beneficiaries will draw up a detailed budget for activities to be carried out. This budget will be consolidated by the PIU and after its validation by the Ministry of Tourism, Industry and Energy (MTIE), and will be submitted to the World Bank for review.

Accounting

12. The current sound computerized information system recently acquired by the PIU will be used for the IBRD project. This information system is a multi project version and provides all the relevant financial information.

13. The existing Administrative and Accounting manual of procedures in the closed "Energy, Water and Sanitation Project" is being updated in order to host the new project and the new institutional arrangement for this new project

14. The Loan will be accounted for by the Program on a cash basis and accounting records will be maintained in CVE and U.S. dollars. The Chart of accounts will facilitate

the preparation of relevant quarterly and financial statements including information on the total project expenditures, the financial contribution from IBRD and expenditures by component/category.

Internal Control & Internal Auditing

15. Given the small size of the PIU, there is no internal auditor recruited within the project. However, key internal control procedures (approval and authorization controls, bank reconciliation statements) are described in the manual of procedures.

Funds Flow and Disbursement Arrangements

Disbursement arrangements

16. Disbursements will be made in accordance with procedures outlined in the Disbursement Handbook for World Bank Clients. The proceeds of the credit will be disbursed over a four-year period. On project closure, a period of four (4) months (grace period) after the closing date, as agreed with the Bank, will be allowed to complete processing of disbursement for eligible expenditures incurred up to and until the closing date of the loan.

Allocation of Loan proceeds

Category	**Amount of the Grant Allocated** (expressed in US$ million equivalent)	**Percentage of expenditure to be financed** (inclusive of Taxes)
(1) Goods	6.10	100%
(2) Works and non consulting services	42.50	100%
(3) Consultants' Services *(including audits)*	4.00	100%
(4) Training	0.10	100%
(5) Front-end Fee		Amount payable pursuant to Section 2.03 of this Agreement in accordance with Section 2.07(b) of the General Conditions
(6) Interest Rate Cap or Interest Rate Collar premium		Amount due pursuant to Section [2.07(c)] of this Agreement
(7) Refund of preparation advance	0.50	Amount payable pursuant to Section 2.07(a) of the General Conditions
(8) Unallocated	5.00	100%
(9) Retroactive financing*	0.30	100%
TOTAL AMOUNT	**58.50**	100%

Disbursement Methods

17. The project will use the IFR based disbursements method. All replenishments applications will be fully documented except for expenditures against contracts under the prior review threshold to be determined during the procurement assessment. IFR and transaction supporting documentation will be retained at the PIU for review by Bank staff and auditors.

Designated Account (DA)

18. A separate DA in USD will be opened in the Central Bank (BCV) on terms and conditions acceptable to the Bank. This account will be managed by the Ministry of Finance, through the General Treasury Department (DGT) and the MTIE, through the Project Implementation Unit (PIU). The DA will be used for all eligible payments financed by the Loan as indicated in the specific terms and condition of the Financing Agreements. Supporting documentation for Statement of Expenditures (SOE) and IFR will be retained and kept in a safe place by the PIU, which has the primary responsibility for maintaining all documentation.

19. ***Funds flow arrangements****:* The project will submit initially a withdrawal application to the Bank with six month cash flow projection based on agreed project work plans and budgets. The Bank will process the withdrawal application and deposit funds into the Designated Account. Funds will then be transferred from the Designated Account to consultants and suppliers for all eligible payments financed by the loan. The replenishment will do in a quarterly basis.

20. The Disbursement Letter, which will form an integral part of the Loan Agreements, will provide details of the disbursement methods, required documentation, DA ceiling and minimum application size. These will also be discussed and agreed during negotiations of the Agreements.

Reporting and Monitoring

21. The PIU will prepare and provide to the World Bank a quarterly un-audited Interim Financial Report (IFR) in form and substance satisfactory to the World Bank. The report will:

(a) Set forth sources and uses of funds for the Project, both cumulatively and for the period covered by said report, showing separately funds provided under the Loan, and explain variances between the actual and planned uses of such funds;

(b) Describe use of funds by activity/components, both cumulatively and for the period covered by said report, and explain variances between the actual and planned Project implementation.

22. The PIU and ELECTRA will also produce separate annual financial statements no later than six months after the end of the fiscal year and during the period implementation of this project, and these statements will comply with World Bank requirements. These financial statements will be comprised of:

i. A balance sheet reflecting the assets, liabilities and funding of the program based on the cash;

ii. A statement of sources and uses of funds;

iii. A statement of commitments;

iv. The accounting policies adopted and explanatory notes; notes

v. A management assertion that program funds have been expended for the intended purposes as specified in the relevant agreements.

Auditing

23. ***Project:*** The terms of reference for the external auditor will be satisfactory to the Bank and external auditors with experience and qualifications satisfactory to the Bank will be appointed to conduct annual audit of the Project's financial statements. This audit should be carried out in accordance with International Standards on Auditing (ISA), and will include such tests and controls, as the auditor considers necessary under the circumstances. Besides expressing an opinion on the Project's financial statements in accordance with ISA, the auditors will be expected to prepare report on internal controls, management letters giving observations and comments, and providing recommendations for improvements in accounting records, systems, controls and compliance with financial covenants in the IBRD Financing Agreement. The audit report and opinions on the financial statements including the management letter and management response shall be submitted to IBRD within six (6) months of the end of the Recipients fiscal year. The auditors shall be appointed within four (4) months after effectiveness.

24. ***ELECTRA***: ELECTRA's financial statements are regularly audited by independent external auditors recruited on a competitive basis. Those audits are carried out in accordance with International Standards on Auditing (ISA). The audit report and opinions on the financial statements including the management letter and management response shall be submitted to IBRD within six (6) months of the end of the Governments fiscal year.

Audit Report	Entity	Due Date
Project's financial statements	PIU	June 30
ELECTRA's Financial Statements	ELECTRA	June 30

Conditionalities

- **Effectiveness conditions:**
  - the Borrower has updated the Project Implementation Manual
- **Dated covenants**
  - Not later than four months after effectiveness, the Recipient has appointed the external financial auditor of the project with on the basis of TOR and with qualifications and experience satisfactory to the Bank;

Supervision Plan

25. Supervision of the financial management arrangements will be risk based. Given the moderate risk rating associated with exiting Financial Management Arrangements, one on site supervision visit will be conducted each year by the Bank in addition to the review of IFR and the audited financial statements.

Annex 12: Procurement Arrangements

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

A. General

1. **Procurement in the context of the country**. Following the government's approval of the Country Procurement Issues Paper (CPIP) in 2004, the Government adopted a new Procurement Law and regulations, respectively on July 2007 and December 2008. These procurement law and regulations including national standard bidding documents, came into force and have introduced positive changes into the current system. They establish a Regulatory Authority (ARAP) responsible for policy, handling complaints and non-jurisdictional audit of public contracts, as well as procurement units (UGA) within all of the contracting authorities to carry out procurement transactions. The Government is considering the creation of a Public Procurement Directorate within the MOF (DGPE) to ensure internal controls of UGA's activities. For the time being, this internal control is entrusted to the *Tribunal de Contas* (TdC). ARAP is now carrying out its duties successfully and the UGAs have now been set up. General lack of procurement capacity of ministries and the absence of a fully operational procurement framework are the weak points of the current system. In order to ensure that procurement financed under the project will be carried out in compliance with Bank's procedures it will be necessary to address these issues at the level of the MOF.

APPLICABLE PROCUREMENT POLICIES AND PROCEDURES

2. Procurement for the proposed project would 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 & Grants by World Bank Borrowers" dated January 2011; and " Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers " dated January 2011, and the provisions stipulated in the Legal Agreement. The general description of the various items included under different expenditure categories are given below. For each contract to be financed by the Loan, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

PROCUREMENT DOCUMENTS

3. The procurement will be carried out using the Bank's Standard Bidding Documents (SBD) or Standard Request for Proposal (RFP) respectively for all international competitive bidding (ICB) for goods and recruitment of consultants. For national competitive bidding (NCB), the borrower shall submit a sample form of bidding documents to the Bank prior review and will use this type of document throughout the project once agreed upon. The Sample Form of Evaluation Reports developed by the Bank, will be used.

ADVERTISING PROCEDURE

4. General Procurement Notice (GPN), Specific Procurement Notices (SPN), Requests for Expression of Interest, results of the evaluation and contracts award should be published in accordance with advertising provisions in the following guidelines: "Guidelines: Procurement Under IBRD Loans and IDA Credits" dated January 2011; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011. The borrower will keep a list of received answers from potential bidders interested in the contracts.

PROCUREMENT METHODS

5. The different types of procurement activities are as follows:

6. **Procurement of Goods**: Goods procured under this project would include, but not limited to: (i) the provision and installation of metering equipments both to improve ELECTRA's ability to measure energy balances at different levels of electricity transmission and distribution chain and to support for reducing electricity distribution losses by preventing meter and metering installation tampering, and (ii) the design and implementation of an automatic metering management system to ensure proper management and optimization of the remote metering capabilities installed in the existing system.

7. **Procurement of Works**: Works procured under this project would include, but not limited to: (i) the construction of Palmarejo Power Plant (Extension III) in Praia including through the installation of two (2) 10MW heavy fuel oil (HFO) fired generating unit(s) of electricity generation, (ii) the construction of Lazareto Power Plant (Extension I) in Mindelo including through the installation of one (1) 5.5MW HFO fired generating unit(s) of electricity generation, and (ii) the construction and installation of two water storage reservoirs and related interconnecting pipes at Palmarejo Power Plant.

8. **Prior Review Threshold for Goods and Works**: Procurement decisions subject to Prior Review by the Bank as stated in Appendix 1 to the Guidelines for Procurement.

No.	Procurement Method	Prior Review Threshold	Comments
1.	ICB and LIB (Goods)	= or >US$300,000	ICB and LIB for goods will be used for US$ 300,000 and above
2.	NCB (Goods)	The first two contracts, irrespective of their cost estimate	NCB for goods will be used for less than US$ 300,000
3.	ICB (Works)	= or >US$ 3,000,000	ICB for works will be used for US$ 3,000,000 and above
4.	NCB (Works)	The first two contracts, irrespective of their cost estimate	NCB for works will be used for less than US$ 3,000,000
5.	ICB (Non-Consultant Services), if any	= or >US$ 300,000	ICB for non-consultant services will be used for US$ 300,000 and above
6.	NCB (Non-Consultant Services)	The first two contracts, irrespective of the cost estimate	NCB for non-consultants services will be used for less than US$ 300,000
7.	Shopping	= or >US$50,000 and the first two contract under US$50,000	Shopping for works, goods and non-consultants services, will be used for less than or equivalent to US$50,000. If more than US$50,000, prior clearance is needed from IBRD with relevant justifications. The cost estimate will not exceed US$100,000.
8.	Direct contracting	All, irrespective of the cost estimate	None

9. *Prequalification.* Bidders for: (i) Extension of Palmarejo Power Plant in Praia (Island of Santiago) including through the installation of two 10MW heavy fuel oil (HFO) fired generating unit(s) of electricity generation; and (ii) Extension of Lazareto Power Plant in Mindelo (Island of Sao Vicente) including through the installation of one 5.5MW HFO fired generating unit(s) of electricity generation, shall be prequalified in accordance with the provisions of paragraphs 2.9 and 2.10 of the Guidelines.

10. *Proposed Procedures for ….. (as per paragraph. 3.17) of the Guidelines*: N/A.

11. *Reference to (if any) Project Operational/Procurement Manual*: Items to be financed under ….. procured in line with rules in the Operational Manual: N/A

12. *Any Other Special Procurement Arrangements*: N/A

13. For procurement of goods, works and non-consulting services under NCB, the national Standard Bidding Documents (national SBD) if any, agreed with (or satisfactory to) the Bank will be used. In the absence of such national standard bidding documents acceptable to the Bank, the Bank's standard bidding documents will be used. The following special requirements will also be taken into account : (i) in addition to the advertisement of the General Procurement Notice (GPN) in UNDB, bids will be advertised in national newspapers with wide circulation and a sufficient time will be allowed to bidders for bid submission, e.g. four weeks ; (ii) bid evaluation and bidder qualifications criteria will be clearly specified in the bidding documents, including for alternative bids; (iii) no preference margin will be granted to domestic bidders; (iv) eligible firms, including foreign firms, will not be excluded from the competition; and (v) for small contracts, the procedures will require that a competitive method be used.

14. **Selection of Consultants**: Consultant services procured under this project will include but not limited to, (i) technical assistance (TA) for the design and implement key reform steps in the electricity and water sectors, (ii) TA to support for monitoring the Performance Contract, (iii) TA to support ELECTRA for effective supervision of the Part A and B of the Project, and (iv) TA to support the PIU for effective implementation and supervision of the Project including through the provision of technical assistance, audits and design and carrying out of a communication campaign to disseminate ELECTRA's reform.

15. Short lists of consultants for services estimated to cost less than US$200,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. The contracts for services estimated to cost the equivalent of US$200,000 or less per contract may be procured under contracts based on Consultants' Qualifications in accordance with the provisions of paragraphs 3.1 and 3.7 of the Consultant Guidelines. Consultant for services meeting the requirements of section V of the consultant guidelines may be selected under the provisions for the Selection of Individual Consultants, i.e. in essence through the comparison of the curriculum vitae of at least three (3) qualified individuals.

16. **Prior Review Threshold**: Selection decisions subject to Prior Review by the Bank as stated in Appendix 1 of the Guidelines Selection and Employment of Consultants:

No.	**Selection Method**	**Prior Review Threshold**	**Comments**
1.	Competitive Methods (Firms)	= or >US$200,000	None
2.	Single Source (Firms)	All, irrespective of the cost estimate	None
3.	Individual Consultants	= or >US$100,000	None
4.	Single source for Individual Consultants	All, irrespective of the cost estimate	None
5.	Contracts for specific assignments such as contracts for the elaboration of manual of the project implementation and the manual of procedures, contracts for monitoring and	All, irrespective of the cost estimate	The review of those contracts are not based on the selection methods; but due to their

	evaluation assignments; contracts for financial assistance assignments; contracts for financial audit; contracts for technical audit; contracts for environmental and social issues; contracts for legal assignments		sensitivity, they will be subject to prior review
6.	Training	ALL	ALL

17. **Short list comprising entirely of national consultants:** Short list of consultants for services, estimated to cost less than $200,000 equivalent per contract, may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

18. **Any Other Special Selection Arrangements:** N/A

19. **Training, Workshops, Study Tours, and Conferences**: The training (including training material and support), workshops, conference attendance and study tours, will be carried out on the basis of approved annual training and similar activities plan. A detailed training or workshop plan giving nature of training/workshop, number of trainees/participants, duration, staff months, timing and estimated cost will be submitted to IBRD for review and approval prior to initiating the process. The appropriate methods of selection will be derived from the detailed schedule. After the training, the beneficiaries will be requested to submit a brief report indicating what skills have been acquired and how these skills will contribute to enhance their performance and contribute to the attainment of the project objectives.

20. The procurement procedures and standard bidding documents (SBDs) to be used for each procurement method, as well as model contracts, will be presented in the Project Implementation Manual.

B. ASSESSMENT OF THE AGENCY'S CAPACITY TO IMPLEMENT PROCUREMENT

21. Procurement activities will be carried out by the PIU - UGPE (*Unidade de Gestao de Projectos Especiais*), within the Directorate of Energy of the Ministry of Tourism, Industry and Energy. The PIU is the same agency that implemented the recently closed, IDA and GEF financed, Energy and Water Sector Reform and Development Project. The PIU staff is comprised of a Coordinator, a Finance Officer, a Project Assistant, three Program Officers and a Procurement Specialist. The technical staff will be responsible for preparing, in close collaboration with ELECTRA for component 1and 2 of the project, the technical aspects of the bidding documents including technical specifications and terms of references. The Procurement Specialist in place, hold a Master degree in planning and management of tourism; she has attended several trainings: International Law Institute on International procurement, and procurement clinics delivered by the World Bank's staff. These training have been much appreciated but were very short (2 days).

22. An assessment of the capacity of the PIU was carried out by Sidy Diop, senior procurement specialist, in 2009 and updated by Mamadou Mansour Mbaye, procurement specialist, in October 2011. The assessment revealed that although the PIU is well versed in executing operations financed by World Bank and other donors (including AfDB, JICA): (i) the Project Implementation is not yet up to date, because it does not take into account the procurement Guidelines of January 2011; (ii) even if the filing system is now in place and is

correct, the offices are not secured because doors are not locked after work, and (iii) the staff's knowledge of procurement needs updating.

23. The corrective measures that have been agreed are:

i) The procurement officer will be responsible for the coordination of all procurement activities, including the following: (i) preparation and updating of the procurement plan (ii) preparation, finalization and launching of the Requests for Proposal and bidding documents; (iii) drafting of minutes of opening of the bids/proposal and preparation of the evaluation reports; (iv) quality control of procurement documents (TORs, RFP, bidding documents, evaluation reports, contracts, etc.) prepared by the technical staff including ELECTRA before submission to the Bank when prior review is required; (v) preparing the contracts, and overseeing the payments to contractors; and (vi) drafting procurement progress reports. All project procurement documents for prior review should be submitted to the World Bank through the PIU. The procurement officer will oversee and manage the project's procurement activities and ensure that these activities are proceeding in a timely manner and according to World Bank procurement procedures;

ii) The Project Implementation Manual will be updated;

iii) The offices will be locked after work. In addition the UPI will receive a copy of the manual of archiving developed by the Bank;

iv) The PIU team will benefit from specific procurement and contract management trainings so as to ensure a rapid and smooth implementation of the project.

24. The overall project risk for procurement is substantial and is expected to be moderate once the mitigation measures are implemented.

C. SIMPLIFIED PROCUREMENT PLAN

I. General

25. **Project information**: Cape Verde : Recovery and Reform of the Electricity Sector Project

26. **Project Implementing Agencies**: the Project Implementation Unit (PIU) within the General Directorate of Energy of the Ministry of Tourism, Industry and Energy

27. **Bank's approval Date of the Procurement Plans**: November 3, 2011

28. **Date of General Procurement Notice**: still to be disclosed

29. **Period covered by these Procurement Plans**: March 2012 – March 2016

Goods and works and non consulting services

1	2	3	4	5	6	7	8	9
Ref. No.	**Contract (Description)**	**Estimated Cost (US$000s)**	**Procurement Method**	**P/Q**	**Domestic Preference**	**Review by Bank (Prior/Post)**	**Expected Bid-Opening Date**	**Comments**
1	Extension of Palmarejo Power Plant in Praia	30,000	ICB Lot 1	Yes	No	Prior	July 2012	Single ICB with 2 lots
1	Extension of Lazaret Power Plant in Mindelo	11,000	ICB Lot 2	Yes	No	Prior	July 2012	
2	Additional water storage capacity in Palmarejo	1,500	NCB	No	No	Prior	July 2012	
3	Metering equipments to measure energy balance	2,300	ICB Lot 1	No	No	Prior	Juin 2012	same ICB with 3 lots
3	Acquisition and installation of 15,000 split meters	3,200	ICB Lot 2	No	No	Prior	Juin 2012	
3	Acquisition and installation of an Automatic Metering Management system	330	ICB Lot 3	No	No	Prior	Juin 2012	
4	IT equipment for the PIU	50	Shopping	No	No	Prior	Juin 2012	
5	Office equipment and supplies for PIU	50	Shopping	No	No	Post	Juin 2012	

(a) ICB Contracts estimated to cost above the equivalent value of US$ 3,000,000 for works and US$ 300,000 for goods per contract and all Direct contracting will be subject to prior review by the Bank

Consulting services

1	2	3	4	5	6	7
Ref. No.	**Description of Assignment**	**Estimated Cost**	**Selection Method**	**Review by Bank (Prior / Post)**	**Expected Proposals Submission Date**	**Comments**
1	TA for the finalize the design and implement key reform steps in the electricity and water sectors	950,000	QCBS	Prior	July 2011	Process completed prior to appraisal
2	TA to support for monitoring the Performance Contract	200,000	QCBS	Prior	April 2012	
3	TA to support ELECTRA for effective supervision of the Part A and B of the Project	500,000	QCBS	Prior	April 2012	
4	TA to support the PIU for effective implementation and supervision	100,000	Individual Consultants	Prior		
5	Communication	50,000	Individual Consultant	Post		
6	Monitoring and Evaluation System	50,000	Individual Consultant	Post	September 2012	Prior review by Bank on the TORs
7	Training, workshops, conference attendance and study tours	100,000	QBS	Prior		Based on annual training plan
8	External accounting audits	100,000	LCS	Prior	April 2012	

(b) Consultancy services (firms) estimated to cost above US$ 200,000 per contract and consultants services (individuals) estimated to cost above US$ 100,000 and single source selection of consultants will be subject to prior review by the Bank.

(c) Short list comprising entirely of national consultants. Short list of consultants for services, estimated to cost less than US$ 200,000 equivalent per contract, may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines

D. PROCUREMENT PLAN

30. The Borrower finalized its procurement plan for project implementation which provides the basis for the procurement methods. This plan (see attachment 1) was agreed between the Borrower and the Project Team on November 3, 2011 and will be available at the Project Implementation Unit. It will also be available in the project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

E. FREQUENCY OF PROCUREMENT SUPERVISION TO BE CONFIRMED DURING APPRAISAL

31. In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended one supervision mission every six (6) months and one Post Procurement Review (PPR) each year to visit the field to carry out post review of procurement actions.

ATTACHMENT 1: DETAILS OF THE PROCUREMENT ARRANGEMENTS

1. Works and Non Consulting Services

(a) List of contract packages to be procured :

Country:Cape Verde
Project: Recovery and Reform of the Electricity and Water Sector
Project Implementing Agency: PIU within General Directorate of Energy

Loan/Credit #		BASIC DATA							Bidding document, incl. specifications and quantities		in the case of a posteriori review, the date of non objection is not necessary						Contrat Preparation		
											Specific Notice	Bidding document period		Evaluation des Offres					
Description*	Bidding document Number	Lot Number	Lump Sum or Quantities	Procurement Method	Estimated amount in US$'000	Pre/Post Qualification Y/N	Review a priori or a posteriori	Forecast vs Actual	Prep. & submission by Implementing agency	Date of Non-objection	UNDB on-line GATEWAY National Press	Date of bidding document	Deadline and Opening	Date of submission Evaluation Report	Date of Non-objection	Forecast vs Actual	Estimated amount in US$'000	Date of Contract Award	Date of Contract signature
Normal Length of Steps involved						If prequalification			4 - 7 weeks	1 - 1.5 weeks	1.5 - 2 weeks	1.5 - 2 weeks	6 à 12 weeks	1 à 2 weeks	1.5 - 3 weeks			1 week	1.5-3 weeks
						add 7-13 weeks													
List of Contracts (Works)																			
Component 1: Investment																			
	1	1		ICB	30,000.00	Y	Prior	Forecast	18-04-2012	26-04-2012	30-04-2012	04-05-2012	05-07-2012	12-07-2012	25-07-2012	Forecast	0.00	27-07-2012	28-08-2012
Extension of Palmarejo Power Plant in Praia								Actual								Actual			
	1	1		ICB	11,000.00	Y	Prior	Forecast	18-04-2012	26-04-2012	30-04-2012	04-05-2012	05-07-2012	12-07-2012	25-07-2012	Forecast	0.00	27-07-2012	28-08-2012
Extension of Lazareto Power Plant in Mindelo								Actual								Actual			
Additional water storage capacity in Palamrejo (Praia)	1			tbd	1,500.00		Prior	Forecast	18-04-2012	26-04-2012	30-04-2012	04-07-2012	20-06-2012	28-06-2012	12-07-2012	Forecast		16-07-2012	09-08-2012
								Actual								Actual			
Total Cost					42,500.00			Forecast								Forecast	0.00		
					0.00			Actual								Actual	0.00		

2. Goods

Country: Cape Verde
Project: Recovery and Reform of the Electricity and Water Sector
Project Implementing Agency: PIU within General Directorate of Energy

Prêt/Crédit #:	Basic Data			Bidding documents, incl. specifications and quantities		Bidding document Period		Evaluation of bids			Contrat Preparation		
Description*	**Estimated amount in US$'000**	**Proc Method**	**Forecast vs Actual**	**Prep. & Submission by Implementing**	**Date of Non-objection**	**Date of Bidding document**	**Deadline & Opening**	**Date of submission Evaluation**	**Date of Non-objection**	**Forecast vs Actual**	**Estimated amount in US$'000**	**Date of Award**	**Date of Contract signature**
Normal length of steps involved				4 - 7 week	1 - 1.5 week	6 - 12 weeks		1.5 - 3 week	1 - 1.5week			1 week	1.5-3 week
List of Contracts (Goods)													
Component 2: Support to Electra's loss													
Metereing equipments to measure energy balances	2,300.00	ICB	Forecast	18-04-2012	28-04-2012	13-05-2012	02-06-2012	09-06-2012	16-06-2012	Forecast	0.00	23-06-2012	24-07-2012
	-		Actual							Actual			
Acquisition and installation of 15,000 split meters	3,200.00	ICB	Forecast	18-04-2012	28-04-2012	13-05-2012	02-06-2012	09-06-2012	16-06-2012	Forecast	0.00	23-06-2012	24-07-2012
	-		Actual							Actual			
Acquisition and installation of na automatic metering management system	330.00	ICB	Forecast	18-06-2012	28-06-2012	12-07-2012	02-08-2012	09-08-2012	16-08-2012	Forecast	0.00	22-08-2012	24-09-2012
	-		Actual							Actual			
Component3: PIU support													
IT equipment for the PIU	50.00	SHP	Forecast							Forecast	0.00		
	-		Actual							Actual			
Office equipment and supplies for PIU	50.00	SHP	Forecast							Forecast	0.00		
	-		Actual							Actual			
Total Cost	5,930.00		Forecast							Forecast	0.00		
	0.00		Actual							Actual	0.00		

3. Consulting services

Country: Cape Verde																								
Project: Recovery and Reform of the Electricity and Water Sector																								
Project Implementing Agency: PIU within General Directorate of Energy																								
Loan/Credit #		Type of Contract				Preparation of Request for Proposals		Request for Expression of Interest (if Necessary)		Short List			Consultants' Proposals		Evaluation of Technical (T) and Financial (F) and Authorization to Negotiate (N) for Projects qpproved after May 2002						Draft Contract		Contract Preparation		
Description*	Procurement Method	Lump sum or time based	Estimated amount in USD'000	A priori or a posteriori review	Forecast vs Actual	Prep & Submission	Date of Non-objection	Date of Publication	Period before short-list	Date of Soumission	Date of Non-objection	Forecast vs Actual	Date of Invitation	Deadline for Submission and Opening	Submission of T Report	Non Objection (T) Evaluation Report	Opening of F proposals	Preparation of (T) and (F) Evaluation	Negotiations (N)	Forecast vs Actual	Date of Subm of Initialized contract	Date of Non-objection	Negotiated Amount of Contract in	Contract Award	Contract Signature
Normal length of steps involved						3 - 6 weeks	1 - 2 weeks	1 - 1.5 week	2 weeks		1 - 2 weeks		4 to 12 weeks		2 - 3 weeks	0.5 - 2 weeks	2 weeks	1 - 2 weeks	2 weeks		1 - 2 weeks	1 - 2 weeks		1 week	1 - 3 weeks
List of Contracts (Consultants)																								
Component 3 & 4																								
TA for the design and implement key reform steps in the electricity and water sectors	QCBS		950,000	Prior	Forecast							Forecast								Forecast	26-10-2011	29-10-2011	685.00	31-10-2011	07-11-2011
					Actual			26-10-2010	30-11-2010	01-02-2011	08-02-2011	Actual	09-06-2011	11-07-2011		18-08-2011	08-09-2011	12-09-2011	29-09-2011	Actual					
TA to support for monitoring the performance contract	QCBS		200,000	Prior	Forecast	07-11-2011	12-11-2011	18-11-2011	02-12-2011	07-12-2012	12-12-2011	Forecast	13-12-2011	06-03-2012	13-03-2012	16-03-2012	30-03-2012	13-04-2012	27-04-2012	Forecast	04-05-2012	09-05-2012	0.00	09-05-2012	16-05-2012
					Actual							Actual								Actual					
TA to support Electra for effective supervision of part A and B of the project	QCBS		500,000	Prior	Forecast	18-01-2012	23-01-2012	30-01-2012	12-02-2012	17-02-2012	22-02-2012	Forecast	23-02-2012	17-05-2012	25-05-2012	30-05-2012	13-06-2012	20-06-2012	04-07-2012	Forecast	11-07-2012	16-07-2012	0.00	16-07-2012	23-07-2012
					Actual							Actual								Actual					
Component 4																								
TA to support the PIU for effective implementation and supervision	tbd		100,000		Forecast							Forecast								Forecast					
					Actual							Actual								Actual					
Communication	IC		50,000		Forecast							Forecast								Forecast					
					Actual							Actual								Actual					
Monitoring and evaluation system	IC		50,000		Forecast							Forecast								Forecast					
					Actual							Actual								Actual					
Training, workshops, conference attendance and studt tours			100,000		Forecast							Forecast								Forecast					
					Actual							Actual								Actual					
External accounting audits	LCS		100,000	Prior	Forecast	18-01-2012	23-01-2012	30-01-2012	12-02-2012	17-02-2012	22-02-2012	Forecast	23-02-2012	17-04-2012	25-04-2012	30-04-2012	13-05-2012	20-05-2012	04-06-2012	Forecast	11-06-2012	16-06-2012	0.00	16-06-2012	23-06-2012
					Actual							Actual								Actual					
Total Cost			2,050,000		Forecast							Forecast								Forecast			685.00		
			0		Actual							Actual								Actual			#REF!		

Annex 13: Safeguards Policy Issues

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

1. The project design is intended to contribute to the social, economic and environmental development of the country as a whole. From an environmental and social safeguards standpoint, the Cape Verde Recovery and Reform of the Electricity Sector Project is a Category B project. That is, the environmental and social impacts of the project, for the most part, are projected to be minimal, site-specific and manageable to an acceptable level. In light of envisioned project operations to be funded under component 1 (Extension of the Palmarejo Power Plant (Praia), Extension of Mindelo Power Plant on Sao-Vicente Island, and construction of an additional water storage capacity in Palmarejo (Praia) of about 3000m3, there are one Bank Safeguards policy applicable to this operation: Environmental Assessment (OP 4.01).

2. Although the foreseen potential environmental and social impacts of the three main investments under the proposed project are expected to be generally minimal, site specific and easily manageable, they therefore require appropriate mitigation. The GoCV has prepared three standalone ESIAs each including an ESMP for the proposed investments, namely the *Extension of the Palmarejo Power Plant (Praia), Extension of Mindelo Power Plant on Sao Vicente Island, and Construction of two additional water storage tanks (capacity:2x1,500m^3) in Palmarejo (Praia).*

3. *From the Social standpoint:* The project initially prepared an RPF and disclosed it in-country and at the InfoShop in December 2010. However, the technical missions have subsequently confirmed that OP 4.12 is not triggered for this project and that no Resettlement Action Plan (RAP) is necessary as no land acquisition or resettlement is foreseen. ELECTRA owns/leases the land on which its assets are located and there no claims on the land or people residing on/using the land. The foreseen negative impacts of the project are expected to be minimal and site specific (activities will take place in existing power and water stations); human settlements are within boundaries relatively distant from the existing stations) the policy will remain triggered to safeguard any potential risk that would result in land acquisition, restriction to access and/or loss of tangible livelihoods supporting assets.

4. Moreover, learning from past experience, and to ground the ownership process of the proposed project activities, participatory public consultations were held not only with stations' personnel, but also with a critical mass of beneficiary communities including women and vulnerable groups and other key stakeholders such as the private sector. This process is meant to be maintained throughout the project cycle to establish the ground for more social accountability in the sustainability of project operations.

5. Moreover, in addition to the direct benefits from easy access to energy services, the project is expected to bring more wealth to the local beneficiary communities especially during the construction phase as many of them will be hired and earn substantial money to help enhance the livelihood of their respective households. In the meantime, income generating activities are foreseen to be developed at/nearby construction sites as many women and young men will possibly develop services (restaurants, street selling, and/or others needed resources) that would contribute to temporary economic wellbeing of these vulnerable groups.

6. *From the environmental standpoint*, notwithstanding the benefits expected to accrue to local communities – in terms of easy access to electricity services and, by implication, improvement and their overall quality of life; and induced development in key industries,

most notably tourism – investments in energy production have, sometimes, adverse impacts on the biophysical and socioeconomic environments, if proper mitigation measures are not in place. Negative environmental and social impacts mainly result from construction, operation and maintenance of power plants or the construction of large water reservoirs. In general, clearing of vegetation from sites and right of ways and construction of access roads are the main sources of construction-related impacts. These include, but not limited to: soil erosion due to land clearing and degradation; habitats degradation; air and noise pollution; land acquisition, loss of livelihood and economic activities on the part of project affected people; impacts on cultural and historical physical resources.

7. The ESIA/ESMP devises standards methods and procedures specifying how future subprojects whose location, number and scale are unknown will systematically address environmental and social issues in the screening and categorization, sitting, design, implementation, operational and maintenance of the subproject lifecycle. In addition, it provides sound institutional arrangements outlining the roles and responsibilities of the various stakeholder groups involved with the implementation and monitoring of identified measures. The ESMP also makes provisions for capacity strengthening measures and awareness raising campaigns targeting relevant actors closely involved with implementation and monitoring of project environmental and social management.

8. Together, these safeguard instruments (the ESIA/ESMP), are considered both as a planning tool and as a means for a harmonious integration of the project in its bio-physical and social environment. They can also be considered as a way to maximize the positive effects on the same environment.

9. Although the potential environmental and social impacts of the infrastructure investments under the proposed project are expected to be generally minimal, potentially significant localized impacts may occur, thus requiring appropriate mitigation. The mitigation measures are described in the Environmental and Social Management Plan (ESMP), and in the Environmental and Social Impacts Assessment (ESIA) which have been prepared and disclosed in-country and at the Bank's InfoShop. The ESIAs/ESMPs conform with the Bank's Environmental, Health and Safety Guidelines

10. The ESMP derived from the ESIA provides for a systematic screening process for the investment components, namely: (i) power generation in Praia and Mindelo; and (ii) water desalination plant in Praia with a storage capacity. They define procedures and institutional responsibilities and set out basic guidelines and principles to be used for subproject level environment and social assessments, evaluation of potential impacts and preparation of appropriate mitigation measures through (ESIAs/ESMPs) during project implementation, if deemed necessary.

Monitoring mechanisms

11. Furthermore, to ensure that project safeguard measures are systematically carried out throughout the project lifespan, a number of indicators need to be measured, as part of the project global monitoring plan.

- Safeguards instruments (ESMPs) implemented satisfactorily and according to schedule;
- Effective application of environmental clauses by contractors
- Effective management, treatment and disposal solid and liquid wastes
- Number/ Frequency of annual Safeguard supervision and project reviews undertaken;

- Number training programs carried out for safeguard capacity strengthening; and
- Number of institutions/organizations or stakeholder groups trained in accordance with specified measures identified in the safeguard instruments.

Arrangement for safeguards monitoring

12. Overall coordination of the project environmental and social safeguards function will be carried out by ELECTRA, who will appoint a seasoned environmental and social specialist to that effect, no later than 30 days after project effectiveness. He/she will be responsible for overseeing project compliance with environmental and social guidelines and proposed mitigation plans in implementing Component 1 and 2 of the project, in accordance with national and Bank policies and procedures.

13. All contractor bidding documents will include specific environmental and social clauses to be strictly implemented during implementation phase. Resident Engineers will be appointed at each of the construction sites to closely monitor contractors' work. The resident engineer's team shall include an environmental and social specialist, who will attend to the effective mitigation measures incumbent to the contractor.

14. Responsibility and oversight of project's overall compliance with national and Bank environmental and social safeguards policies will be devolved to the Project Implementation Unit (PIU), who will be working with the Environmental and Social Unit of ELECTRA, and in close collaboration with the Ministry of Environment (a Social and Environmental Focal Point has been identified), and other technical agencies involved, or able to play a vital role water supply and sanitation facilities. These include, but not limited, to the National Environmental Agency (NEA), the Directorate of Public Health, the Directorate of Cultural Heritage, the Directorate of Civil Protection, the Municipalities of Praia and Mindelo etc. A "*protocole d'accord*" sanctioning this close partnership between ELECTRA, Ministry of Environment, as well as clear Terms of Reference, outlining the mode of intervention of the national environmental agency, will be issued and ratified by the various parties, prior to project commencement. Details on how other relevant actors will intervene will be worked out prior to project's commencement. Further, all civil works, will be contingent on broad-based and sustained consultation with local communities.

15. A second dimension of the monitoring program would focus on sound operations of energy and potable water production and supply water systems. This calls for regular review, as described in the reports, of the system performance standards, observance of EHS standards, as it applies to the biophysical environment, company's employees and local community health, safety and well being. Required information will be collected to monitor attainment of those standards in an efficient and timely fashion.

Annex 14: Documents in project files

CAPE VERDE: Recovery and Reform of the Electricity Sector Project

- Performance contract signed between ELECTRA's Board and the GoCV in October 2011 and MERCADOS report "Performance agreement for ELECTRA" of September 2011
- Regulamento Tarifário de sector Eléctrico approved by ARE's Board on October 14, 2011
- Feasibility study for further investment in Electricity Generation and Water storage by Mott MacDonald, September 2011
- Mercados reports on ELECTRA – from recovery to sustainability, June 2011
    - Business Plan
    - Implementation and action plan
    - Financial Plan and Modeling
- Action plan for the second phase of its institutional restructuring approved by GoCV in October 2011
- Nodalis Conseil report on Medium Term strategy development for the Cape Verde energy sector, March 2009
- A World Bank working paper by Fernando Lecaros on the Evaluation of situation and perspectives for ELECTRA, December 2007
- Hector Farina Avocats Strategic, Legal and Financial advice on the restructuring of ELECTRA, 24 March 2010
- Simonsen Associados/EuroVentures Market Study for Energy Demand, Cape Verde, February 2008
- World Bank Program Document for a Proposed Fifth Poverty Reduction Support Credit,November 2009
- Report to IFC by Dominique Mercier (DME) on the Cape Verde Wind Power Project, Version 2, January 10th 2009