



1. Project Data:		Date Posted : 03/11/2003	
PROJ ID: P002241		Appraisal	Actual
Project Name: Rw Energy Sector	Project Costs (US\$M)	38.95	19.0
Country: Rwanda	Loan/Credit (US\$M)	26.0	19.0
Sector(s): Board: EMT - Power (51%), Mining and other extractive (16%), Central government administration (15%), Renewable energy (10%), Oil and gas (8%)	Cofinancing (US\$M)	10.63	0
L/C Number: C2456			
	Board Approval (FY)		93
Partners involved : None	Closing Date	12/31/1998	12/31/2001
Prepared by :	Reviewed by :	Group Manager :	Group:
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2. Project Objectives and Components

a. Objectives

The project has four objectives :

- 1) Create an enabling regulatory and policy environment .
- 2) Enhance the efficiency of the utility company's (ELECTROGAZ) operations.
- 3) Provide technical assistance and training to key sector institutions to build up investment planning capacity, and strengthen government capacity to formulate a coherent sector policy and to monitor sector activities including those related to woodfuel, methane, petroleum products, and least -cost power supply alternatives for rural areas .
- 4) Rehabilitate key power infrastructure .

Revised Objectives :

The project was restructured in 1998 and DCA amended after three years of unsatisfactory performance and was renamed the Energy Sector Rehabilitation and Urban Waste Management project . Two new objectives were added :

- 1) Contribute to the improvement of the sanitation conditions related to waste disposal in the city of Kigali, and
- 2) Help the Prefecture de la Ville de Kigali (PVK) to establish a minimum physical and institutional capacity for sustainable improvement of waste sector management, including a cost recovery policy .

b. Components

The original project had two main components :

A) Strengthening Regulatory and Policy Environment : (i) institutional reform program of the power subsector, including consulting services to revise ELECTROGAZ' existing law and statutes under lease contract; (ii) introduction of incentives to improve the efficiency of the charcoal subsector; (iii) implementation of environmental and technical guidelines for future development of Lake Kivu's methane gas; (iv) studies to design and implement a strategy for solar home systems; (v) technical assistance and training to strengthen the capacity of the Ministry of Commerce, Industry, and Handicrafts (MICOMART).

B) Rehabilitation and Improvement of Key Power Infrastructure : (i) rehabilitation and extension of the distribution network for five cities; (ii) improvements in the transmission network substations; (iii) overhaul of the Mukungwa I hydro power station, and of the hydraulic structures of the Gisenyi and Gihira hydroplant; (iv) feasibility studies for hydroplants; (v) constitution of a reserve stock of spare parts for plants and substations; and (vi) capacity building and training for the the Project Coordination and Administration Unit (PCAU) and Project Implementation Units (PIUs).

Revised Components :

As a result of the project's restructuring, the components were revised to include an Urban Waste Management Component. The original Energy component, as outlined above, was maintained, but some of its original subcomponents and activities were scaled down while one new component, the provision of project operating costs to the project management unit, was added . Scaled down components were: (i) TA to prepare the restructuring

package for ELECTROGAZ; (ii) training of charcoal and improved stoves producers; (iii) training in maintenance of photovoltaic systems; (iv) a bathymetric survey and an environmental impact study of the identified sites on the Lake Kivu; (v) strengthening the capacity of MICOMART, and provision of equipment and training to a small monitoring and analysis unit for petroleum products within MICOMART. Component B was mostly retained but the subcomponent: rehabilitation of transmission networks and hydropower stations was reduced to studies rather than physical improvement.

Component II : Urban Waste Management :

Part A: Collection and Disposal of Garbage and Septage . This new component consists of : (i) design of a pilot collection and disposal scheme in Kigali, involving local communities and the private sector; (ii) studies of cost recovery/financial resource mobilization, leasing arrangements, and affordability /willingness to pay surveys; (iii) study to establish a proper institutional framework for PVK while strengthening its financial management capacity through technical assistance; (iv) definition and implementation of a strategy for community participation and liaison, training and capacity building under contractual arrangements with NGOs, and equipment purchase; and (v) minimal upgrading of the existing dump site and construction of collection stations .

Part B: Preparation of an Extension Phase . This component consists of the following : (i) study on sanitary landfill identification and preparation, including an environmental impact study; (ii) closing of the existing dumpsite; and (iii) study of the treatment and reuse of septage and garbage .

c. Comments on Project Cost, Financing and Dates

Total project cost was \$19.13 million, compared to the appraisal estimate of \$38.95 million. The Bank provided an IDA credit of \$26 million, of which only \$19 million was disbursed, while the remaining \$ 7 million was cancelled. The government provided counterpart financing in the amount of \$ 0.13 million, compared to the appraisal figure of \$2.32 million. At appraisal, co-financing of \$ 10.63 million was provided by the European Investment Bank (EIB) (\$7.92 million), and the French Aid Agency Caisse (CCCE)(\$2.71 million). After the civil war and the resulting institutional weaknesses, and arrears from the government, the co-financiers withdrew their financial support for the project . As a result, the IDA credit became the sole source of project funds with minimal contribution from the government . (The main text of the ICR noted that the actual cost of the project was \$ 14.9 million, which is not consistent with Annex 2 of the ICR. This ES uses the figures indicated in Annex 2).

With the project's restructuring, the IDA credit of \$26 million was reallocated, as follows: Energy (\$21.54 million), with rehabilitation accounting for \$7.22 million and the restructuring of ELECTROGAZ, \$3.94 million; and Urban Waste Management (\$4.46 million).

The project was delayed for two years because of the civil war and resumed operation in 1995, and was subsequently restructured in 1998. The project's closing date was extended three times . The project closed in December 31, 2001.

3. Achievement of Relevant Objectives:

1. Create an enabling regulatory and policy environment . *This objective was substantially achieved.* The project facilitated the dialogue with the government and civil society, through workshops and seminars in 1995 through 1996, on the substance and timing of the energy sector reform, and the creation of a multi -sector regulatory authority in August 2000. The project also helped develop a package to attract potential investors in the methane gas subcomponent to include: (i) a draft Act to promote the exploration, development, and production of indigenous petroleum; (ii) a model agreement for a service contract (production sharing); (iii) a complete bathymetric survey of the Lake Kivu including an environmental impact survey of the identified sites; and (iv) a promotional document for potential private investors. In January 2002, the government signed a Memorandum of Understanding with a local consortium to explore and develop methane gas reserves at the Lake Kivu to produce electricity .

2. Enhance the efficiency of ELECTROGAZ' operations . *This objective was not achieved.* The restructuring of ELECTROGAZ was not completed although the government had approved a restructuring plan and launched a pre-qualification process for potential investors in July 2000. The operational efficiency of ELECTROGAZ was not improved.

3. Provide TA and training to key sector institutions . *This objective was partially achieved.* The following were trained under the project: (i) Fifty (50) producers of charcoal and efficient stoves producers; (ii) twenty (20) technicians specializing in the maintenance of home solar energy systems; and (iii) about 15 staff from the Ministry of Energy and ELECTROGAZ in project preparation and implementation and in the functioning of the utility regulatory agencies. Although a small petroleum monitoring and analysis within MICOMART was established, equipment procured and the existing staff trained; the project unit was not fully operational due largely to lack of availability of qualified personnel. The capacity building was not undertaken .

4. Rehabilitate key power infrastructure . *This objective was partially achieved.* Although maintained as an objective

of the restructured project, the funds allocated for the physical component of the project were cancelled in 1999 (see section 2b and 2c). As a result, only preparatory studies were completed related to the rehabilitation, extension of distribution and transmission lines in five cities, as well as the feasibility studies of a hydro site on the Nyabarongo river.

5. Contribute to the improvement of the sanitation conditions in the city of Kigali . *This objective was not achieved* . Although the design of the pilot phase was completed and approved, it was not implemented; and the participation of the local community and the private sector, as envisaged in the amended DAC, did not materialize . While a lot of progress was made in undertaking the studies and the equipment was purchased, as originally planned, the physical component of the collection and disposal of solid waste was not completed . The purchased equipment, including : 8 trucks, 200 containers, and a transfer station; were not properly utilized and maintained .

6. Help the PVK to establish a minimum physical and institutional capacity for sustainable improvement of waste sector management, including a cost recovery policy . *This objective was not achieved* . The government did not agree to any of the advice provided by the UNDP /Bank Sanitation Group on alternative solid waste collection schemes, nor to the recommendations of the cost recovery study funded under the project .

4. Significant Outcomes/Impacts:

Efforts to restructure ELECTROGAZ, although unsuccessful, led to a long lasting debate within government, and a general consensus and renewed resolve by the government of the need for a fundamental restructuring and privatization of ELECTROGAZ. The selection of a private operator, originally planned to be completed under the project, is now expected to be completed under the Competitiveness and Development Project (Cr. 3499) approved in 2001.

5. Significant Shortcomings (including non-compliance with safeguard policies):

Risks related to political instability and the resulting institutional weaknesses and changing government commitment were not assessed during project appraisal of the original ERSP and in the restructured project . ELECTROGAZ had numerous problems: weaknesses in institutional capacity and lack of qualified personnel, absence of financial controls and discipline leading to large accounts receivables from the public sector and private clients, inadequate maintenance and high transmission and distribution losses . Attempts at improving the operational efficiency of ELECTROGAZ should be viewed in light of prior policy reversals including : (i) in 1997, refusal by the newly appointed Board of ELECTROGAZ to award a management contract to the winning private operator; (ii) in May 2000, decision by the Government to keep ELECTROGAZ as a single entity after passing a law in 1998 abolishing ELECTROGAZ' monopoly in generation, transmission and distribution of electricity, water, and gas and allowing private participation by private operators.

6. Ratings :	ICR	OED Review	Reason for Disagreement /Comments
Outcome :	Satisfactory	Moderately Unsatisfactory	The ICR rates the Outcome as "Marginally Satisfactory." This ES downgrades this for the following reasons: (1) A major objective of the project, which was to restructure and improve the efficiency of ELECTROGAZ, was not achieved. Although other objectives were partially achieved, they were either small components of the project (methane gas, 6 percent; petroleum, 4 percent), or they were undertaken (equipment purchase and training of personnel) but were not fully utilized because of overall lack of institutional capacity and qualified personnel; (2) Additional objectives pertaining to the Urban Waste Management component (24 percent of the project cost), which resulted from the restructuring of the project, were not achieved at all.
Institutional Dev .:	Modest	Modest	
Sustainability :	Likely	Non-evaluable	Only for the Energy component of the project.
Bank Performance :	Satisfactory	Unsatisfactory	The Bank was not sensitive to political risks and the resulting institutional

			weaknesses of the government during appraisal of the original project and its restructuring. The project's development objectives and components became more diverse and complex, even after project restructuring and when the country was still transitioning from a post-conflict situation. Supervision missions for the project from 1994 to 2000 were done only once a year (see Annex 4 of the ICR), and between 1999 and 2000, after restructuring to a more complex project, the Bank's supervision was limited to correspondence and video conferences.
Borrower Perf.:	Satisfactory	Satisfactory	
Quality of ICR:		Satisfactory	

NOTE: ICR rating values flagged with '*' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

1. Risk assessments for a project should be sensitive to and should deliberately include an assessment of the political economy and stability of the country, especially in countries where there have been recent experience of large scale civil and political unrest.
2. In restructuring a project under a post-conflict situation, the design should be kept simple and the institutional requirements aligned with existing institutional capacity of the government and its implementing agencies. The project should, therefore, not be front loaded with multi-sector development objectives and components.
3. In a post-conflict situation, project objectives should make a clear distinction between meeting short-term needs for emergency purposes and achieving long-term objectives on sector reforms.
4. Government commitment is a key ingredient to successful project implementation, especially in countries transitioning from post-conflict situation.

8. Assessment Recommended? ☐ Yes ☒ No

9. Comments on Quality of ICR:

A very thorough and candid ICR.