

**PROJECT INFORMATION DOCUMENT (PID)****APPRAISAL STAGE**

Report No.: AB3372

<b>Project Name</b>	Multi-Sector Infrastructure Project
<b>Region</b>	AFRICA
<b>Sector</b>	Power (60%); Water supply (40%)
<b>Project ID</b>	P097974
<b>Borrower(s)</b>	GOVERNMENT OF BURUNDI
<b>Implementing Agency</b>	
<b>Environment Category</b>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
<b>Date PID Prepared</b>	March 17, 2008
<b>Date of Appraisal Authorization</b>	March 10, 2008
<b>Estimated Date of Board Approval</b>	May 13, 2008

**1. Country and Sector Background**

Burundi is a landlocked country that straddles Central and East Africa, with a total land area of 27,834 km<sup>2</sup>, and approximately 7.3 million inhabitants, about 10.6% of whom live in urban areas. Burundi has emerged from a cycle of politico-ethnic conflicts that lasted more than 12 years and claimed the lives of about 300,000 people while displacing about 1,200,000 people, or about 16 percent of the population. The effects of a regional economic embargo between 1996 and 1999 and the negative consequences of the war on the economy resulted in a ten-year period of economic decline. By 2004, GDP per capita had fallen from US\$180 in 1993 to US\$83, one of the lowest in the world. Life expectancy at birth fell from 51 years in 1993 to less than 42 in 2005. The war and the economic decline took a heavy toll on the country's infrastructure, which was either destroyed or has seriously deteriorated due to poor maintenance and lack of investments, and particularly affected the water and electricity facilities.

Poverty, which was widespread before the conflict, has increased significantly since 1993 in both rural and urban areas. In 1998, the poverty rate for the whole country was 81 percent, registering 41 percent in Bujumbura and 83 percent in the rest of the country<sup>1</sup>. Infant mortality rates were as high as 114 per 1,000 (2004). Overall, there has been a sharp deterioration in all social indicators, which have become among the worst in Africa. The Poverty Reduction Strategy for Burundi is built around four main axes: (i) improving governance and security; (ii) promoting sustainable and equitable economic growth; (iii) developing human capital; and (iv) combating HIV/AIDS. With regard to developing human capital, the government's objective is to re-establish quality social services in partnership with the very communities that will be the beneficiaries. To this end, priority actions targeting the health and education sectors, water supply and sanitation, urban planning and decent housing for all have been identified. Indeed, the absence of the most basic services such as water supply and electricity, combined with housing scarcity, is a major threat to the consolidation of peace and needs to be addressed.

<sup>1</sup> The only recent household survey from which poverty could be measured directly was conducted in 1998. A Core Welfare Indicators (CWIQ) survey was initiated in 2006 - are results available??? The PRSP considers the 1998 figures to accurately reflect the situation in 2006.

Since 2000, the Government has implemented a program of financial and structural reforms to stabilize the economy and revive economic activity. This program, supported by IDA and the IMF, has been implemented in a satisfactory manner, despite very adverse circumstances, and reflects the Government's commitment to recovery and reform. The government has also engaged in an ambitious program to improve economic governance and fiscal management, and to strengthen the implementation capacity for pro-poor programs. Between 2001 and 2006, GDP grew by 2.7 percent per annum, while inflation was maintained in the single digits. Reforms and parallel political progress have resulted in an increase in agricultural production and construction, as private confidence has returned and donors have re-engaged. Successful implementation of the IMF and IDA supported economic program opened the way for Burundi to reach the HIPC decision point in August 2005 for a total debt relief of approximately US\$826 million in NPV terms.

## **2. Objectives**

The proposed project development objective is to (a) increase access to water supply services in peri-urban areas of Bujumbura; (b) increase the reliability and quality of electricity services; (c) increase the quality and reliability of water supply services, with primary focus on Bujumbura; and (d) strengthen REGIDESO's financial sustainability. The project will accomplish this by helping REGIDESO to restore its financial and commercial viability and the quality and continuity of services in the face of the increasing demand from individual consumers and economic agents. The project has been designed to provide a balance between immediate needs and medium- to long-term planning. It addresses the urgent need to fill the current gaps between supply and demand in both electricity and water supply. At the same time, the project supports long term planning activities and studies, as well as the strengthening of the operational capacity of the main sector institutions in order to avoid or effectively reduce future gaps.

As noted above, the project will contribute to the higher level objectives described in the ISN. Indeed, better electricity service will prompt economic growth and diversification by allowing current commercial and industrial users to function better and prospective entrants (domestic and foreign) to establish themselves in Burundi more readily.

Improved and expanded water services will contribute to public health and social stability. By rapidly improving access to basic water service for thousands of beneficiaries in the capital's outskirts, where the population is predominantly of low- and very low-income. The improvement of service coverage will indeed contribute to long term human resources enrichment and economic growth by allowing children to attend school, and adults (especially women) to engage in additional productive activities instead of spending several hours each day searching for water.

## **3. Description**

The credit instrument will be a Specific Investment Loan (SIL).

The proposed project would comprise three components: (i) Electricity component, which will support emergency investments to rehabilitate the electricity supply system and reduce the supply/demand gap; (ii) water component, which will support urgent/short term investments to increase access to water supply, reduce losses and reinforce the capacity of the supply and distribution system; and (iii) Institutional component, which will support the strengthening of the capacities of both REGIDESO and MWEM.

The proposed implementation period is 5 years; the tentative amount of the IDA grant would be US\$50 million. The allocation of funding between the components would be the following: US\$31

million for the electricity component, US\$15 million for the water supply component; and US\$4 million for the capacity strengthening component. These amounts will be confirmed during the appraisal mission.

**Component 1 - Electricity (US\$ 31.0 million).** This component will focus on restoring a quality electricity supply by financing major rehabilitation of the backbone transmission and distribution grid and increasing generation capacity while financing demand side activities to increase efficiency and reduce consumption at peak hours. In addition, the component will address medium to long term energy needs by supporting technical studies on alternative energy sources and the preparation of bidding documents for the next increments of small and large sized hydropower plants. Specifically, the following activities are planned under this component:

1(a) **Operational subsidy for thermal generation of electricity (US\$6.5 million).** The project will support the operation of the existing thermal generation plant, which will add 5.5 MW capacity to the system during peaking hours, by providing funding to procure diesel fuel for 8 hours per week-day operation over three years. The three year period will allow REGIDESO to address the supply gap while it develops additional hydropower capacity in the short-to-medium term through micro-hydropower plants. The funding would be in the form of a declining yearly subsidy (100% in the first year, 75% in the second year, 50% in the third year).

1(b) **Rehabilitation of transmission and distribution network (US\$19.5 million).** The electricity network in Burundi has received limited attention during the conflict and is now in desperate need of reconstruction and repair. Due to the lack of basic protection and control functions there is a significant risk that supply be interrupted to parts of the network for prolonged periods of time as spare parts and transformers are not readily available. The project will finance urgent investments in the transmission and distribution system as identified by REGIDESO and consultants in a recent review of rehabilitation needs. When completed, the rehabilitation will improve security, reduce outage times and increase quality of supply in the national grid. The investments will re-establish the back-bone grid supply function paving the way for future access expansion.

1(c) **Pre-feasibility and feasibility studies of micro hydropower plants (US\$1.5 million).** To minimize the need for expansion of costly thermal generation capacity to supply the short and medium term demand growth, the project will finance pre-feasibility studies of the 4 most promising sites identified in a 1983 study of hydro-electric generation options. A second phase would complete detailed feasibility and bidding documentation for the two best evaluated candidates from the first phase. The plants would be of run-of-the-river type, thus not requiring any major dam works and could therefore be realized with limited environmental impacts in approximately 2 years.

1(d) **Strategic study on renewable energies (US\$0.5 million).** This study will focus on energies that have a significant development potential such as micro-hydro, wind power solar power systems and others.

1(e) **Improved Revenue Collection (US\$1.5 million):** REGIDESO is running at a considerable financial deficit partly because of its poor billing and collection practices. This subcomponent will finance the acquisition and installation of pre-payment electricity meters for household consumers and public institutions, adapted metering for large consumers/industries, and the renewal of the obsolete electricity meters.

1(f) **Demand Side management program (US\$1.5 million).** This subcomponent will focus on energy savings by households, public Institutions, industrial and large commercial customers. A key component of the efforts to bridge the supply/demand gap will be geared towards reducing consumption by consumers through promotion of energy efficient technologies and policies. The program would have the following activities:

- ***Distribution and promotion of Compact Fluorescent Lights (CFL):*** the component will include financing for the distribution of 200,000 CFLs to REGIDESO clients, to replace existing incandescent bulbs. The program would build on recent experience from neighboring Rwanda and be implemented in phases where a first batch of lights would be distributed for free joined by a promotion and awareness campaign. The following batches of lamps would be subsidized and sold by private sector distribution outlets. The investment is expected to save approximately 5 MW of peak power consumption when completed. The increased public awareness and the significant savings for the individual consumer will create a sustainable market for the products as the lights are gradually replaced. The CFL program is likely to be eligible for carbon credits from verified emission reductions based on a methodology developed for the Rwanda CFL program.
- ***Utility Energy Audit:*** the component will provide technical assistance to Regideso to complete an energy audit of the electricity supply system to identify scope for efficiency improvements. The audit would especially focus on (i) technical loss reduction in the electricity grid (ii) efficiency of pumping systems in use by the utility (iii) losses occurring from poor power factor generated by larger industrial consumers. A small investment package will be designed based on the recommendation from the audit to quickly capitalize on some the potential efficiency gains.
- ***Promotion of Energy Efficiency (EE) Investments to large consumers:*** the Project will finance technical assistance to promote EE technology and build local capacity to provide EE advice to large public institutions, commercial and industrial consumers.
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**Component 2 - Water (US\$15 million).** This component will focus on reducing leakage, selectively rehabilitating and expanding production facilities and networks, extending the service to unserved peri-urban areas of Bujumbura and preparing technical studies and tender documents for some secondary centers. An update of Bujumbura's water master plan, which was done as part of project preparation, will

guide the implementation of the sub-components below. In addition, the project will fund a study to support the development of improved sanitation in urban areas. Specifically, the following investments and studies are planned under this component:

**2(a) Leakage reduction program (US\$3 million).** This subcomponent will comprise (i) technical assistance to REGIDESO for the development of a comprehensive action plan for the reduction of leaks in the system; and (ii) purchase of specific equipment (leak detection equipment, water flow meters, regulator pressure/pressure reducing valves), and equipment for the standardization of the connections, to allow for the implementation of the action plan.

**2(b) Rehabilitation and selective expansion of water treatment capacity (US\$2 million).** This will include:

- ***Refurbishing of teletransmission equipment.*** This equipment was installed 20 years ago at various reservoirs and pumping stations in Bujumbura and is key for the proper operation of the system in order to enable real-time transmission of data such as water levels in different reservoirs, operational state of pumps, pumping rates for both untreated and treated water, chlorination levels, etc. Currently, much of this information is no longer automatically relayed to the dispatching headquarters, causing delayed responses to problems that arise in the system. This sub-component will fund the technical study, recommended equipment and its installation.
- ***Addition of a fourth slow sand filter to the existing water filtration plant (Usine du Lac), and of a raw water pump.*** These additions had been contemplated when the existing structures were built in 1987. At present the additional capacity needed for existing and new customers cannot be reached in the short term through the other production facilities. This sub-component will fund the works, equipment and engineering services related to this expansion..
- ***Emergency repairs at the intake on the Ntahangwa River.*** This raw water intake installations was damaged by flooding and it is in a precarious condition. This sub-component will fund the technical study and ensuing works and equipment.

**2(c) Rehabilitation of distribution networks (US\$3 million).** This sub-component will fund technical studies, works and equipment for the selective rehabilitation of primary and secondary distribution pipes throughout the system. Indeed, a large portion of the network is now obsolete and overly saturated to ensure the adequate supply of water to Bujumbura's growing population, especially toward the peri-urban areas.

**2(d) Extension of distribution networks (US\$6 million)** with a focus on the peri-urban areas of Bujumbura that are characterized by deep poverty and a high proportion of displaced and resettled residents. This sub-component would include technical studies for investments to rehabilitate and upgrade approximately 50 existing public standposts to convert them into more functional standpost kiosks, and to install approximately 185 additional standpost kiosks to improve supply to these areas.

**2(e) Studies of rehabilitation and extension (US\$0.5 million)** with a focus on the urban centers that could not be considered in this operation.

**2(f) An assessment of the development of urban sanitation services (US\$0.5 million).** This includes the identification of suitable technical options and of institutional arrangements for the effective delivery of services in Bujumbura to complement the increased availability of water and ensuing need for its proper disposal.

**Component 3 - Institutional (US\$ 4 million).** The objective of this component is to enhance the ability and effectiveness of the public-public partnership between REGIDESO and the Government to deliver improved electricity and water services. Specifically, the component will help REGIDESO to (i) meet specific performance indicators to improve operational and financial performance, through the execution of a performance contract with the State; (ii) assist REGIDESO in launching a delegated standpost kiosk

management program in the periphery of Bujumbura to improve service delivery at existing and new standposts; and (iii) improve the planning and monitoring capacities of the MWEM and its ability to provide support to REGIDESO when needed.

A key objective of this component is to strengthen the contractual relationship between REGIDESO and the Government (MWEM, Ministry of Finance and Ministry of Planning). A performance contract, to be executed between REGIDESO and the Government by project negotiations, will define the respective obligations of the government and the utility, including specific operational and financial indicators that REGIDESO will be required to meet (see Annex 4a). The performance contract has been designed so as to be simple and independently monitored, with clear mechanisms to resolve differences between the parties and non-compliance issues. Settling of debts from the State is a pre-condition for the signing of performance contract. In addition, an ongoing mechanism to resolve mutual debt issues will be part of the contract. The following activities will be carried out:

**3(a) Monitoring of Performance Contract.** This subcomponent will provide funds necessary to monitor and enforce the performance contract. In addition to a monitoring unit composed of government and REGIDESO representatives, a periodic external evaluation of the performance contract would be prepared, and the status performance indicators would be published quarterly. This will help to provide independent oversight and ensure accountability and transparency to the public in the execution of the performance contract. It will also help to develop a culture of monitoring performance. This regulatory mechanism is conceived as a first step toward the establishment of a permanent regulatory entity, as envisaged in the law 1/014 from 2000.

**3(b) Strengthening of REGIDESO.** This sub-component will fund capacity building activities, studies and equipment for REGIDESO to address current needs in:

- Financial, commercial and customer management. In particular, this subcomponent would focus heavily on upgrading commercial practices and on bill recovery from public entities. This subcomponent would finance an action plan that includes measures to: (i) ensure rigorous and timely metering of water use, billing, and payment; and (ii) support the rehabilitation and upgrading of facilities serving large entities (universities, military camps, prisons, government buildings, etc.);
- IT and accounting. This subcomponent will provide equipment to improve IT systems, which are sorely outdated and at risk of major failure, and to improve Accounting practices (including both hardware and software);
- Operational management. This would include among others (i) planning and oversight of new investments; (ii) operation and maintenance of existing facilities and networks; (iii) energy conservation on the demand and the supply side; (iv) improving the efficiency of the production, distribution and use of electricity; (v) demand management and conservation education regarding both electricity and water supply services, particularly in the public sector.
- Public consultation and information campaign. The project will fund consultant services to assist REGIDESO in launching and maintaining a campaign on water and sanitation to promote: (i) the conservation of water through early detection and prevention of leaks at the household level, and how to avoid wasting water; (ii) hand-washing to prevent the spread of bacteria and disease; (iii) techniques for the safe transportation and storage of potable water to prevent its contamination.
- Collection of monitoring data through recurrent surveys. The project will fund consulting services to conduct an annual household and business survey in the project area to monitor energy and water consumption practices, sanitation practices and satisfaction with electricity and water supply services.

3(c) **Establishment of a standpost management unit within REGIDESO.** The objective of this unit will be to oversee the services at standposts which will be delegated to small operators. The goal is to achieve improved service and cost-recovery at new and rehabilitated standpost service points. In addition, this subcomponent will support capacity building of standpost operators through appropriate training and technical assistance. Specifically, this sub-component will fund the following activities:

- Technical designs for standpost location and specifications, taking into account business viability and user preferences;
- Hiring of an international consultant or NGO with experience in standpost management, which will provide technical assistance to REGIDESO (*accompagnement social*) during the establishment of the program; part of this T.A. contract will consist in ensuring that there is sustainability of the program after the Consultant/NGO contract ends;
- Finalization of the standpost operational manual (“cahier des charges”)and model contract for standpost management;
- Competitive bidding for the award of standpost management contracts;
- Supporting REGIDESO’s capacity to appoint and maintain the necessary staff to oversee the standpost program at first with help from the NGO, and later without it.

This program is detailed further in Annex 4b.

3(d) **This sub-component will fund capacity building activities within MWEM** to enhance its ability to formulate policies and sectoral strategies. Among others, it will provide technical assistance for: (i) drafting the regulations for Law No. 1/014 (of 11/08/2000) that defines the principles, forms and conditions for private sector intervention; (ii) establishment of budgetary resources for the sector in a timely and efficient manner; (iii) revision of the tariff regime to correct the current situation where people being served from standposts pay much more than those served by household connections and to review the lifeline subsidies in order to be fair and at the same time generate more revenues; and (iv) monitoring sector operations, including the independent technical and financial audit of REGIDESO’s performance contract and the use of the financial model that has been developed during project preparation to evaluate and forecast REGIDESO’s performance under different scenarios.

3(e) **Support to the Project Implementation Unit within REGIDESO.** This sub-component will provide funds for technical assistance in the preparation of bidding documents, supervision of works and quality control to ensure the timely delivery of project outputs. It will also provide funds for the independent financial auditing of REGIDESO and other ad-hoc needs.

#### 4. Tentative Financing

Source:	(\$m.)
BORROWER/RECIPIENT	0
International Development Association (IDA)	50
Total	50

#### 5. Safeguard Policies

The two safeguards policies triggered are: Environmental Assessment (OP/BP 4.01) and Involuntary Resettlement (OP/BP 4.12). All Environmental Assessments and Resettlement Plans will be handled according to the provisions made in the ESMF and RPF. These safeguard documents were completed in December 2007 and were deemed satisfactory to the Bank. The “in-country” disclosure took place on February 6, 2008 and the documents were submitted to “infoshop” on February 21, 2008

<b>Safeguard Policies Triggered by the Project</b>	Yes	No
<u>Environmental Assessment (OP/BP 4.01)</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Habitats ( <u>OP/BP 4.04</u> )	<input type="checkbox"/>	<input type="checkbox"/>
Pest Management ( <u>OP 4.09</u> )	<input type="checkbox"/>	<input type="checkbox"/>
Physical Cultural Resources ( <u>OP/BP 4.11</u> )	<input type="checkbox"/>	<input type="checkbox"/>
Involuntary Resettlement ( <u>OP/BP 4.12</u> )	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Indigenous Peoples ( <u>OP/BP 4.10</u> )	<input type="checkbox"/>	<input type="checkbox"/>
Forests ( <u>OP/BP 4.36</u> )	<input type="checkbox"/>	<input type="checkbox"/>
Safety of Dams ( <u>OP/BP 4.37</u> )	<input type="checkbox"/>	<input type="checkbox"/>
Projects in Disputed Areas ( <u>OP/BP 7.60</u> )*	<input type="checkbox"/>	<input type="checkbox"/>
Projects on International Waterways ( <u>OP/BP 7.50</u> )	<input type="checkbox"/>	<input type="checkbox"/>

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