

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

Report No.: PIDA1922

<b>Project Name</b>	BI-Jiji and Mulembwe Hydropower (P133610)
<b>Region</b>	AFRICA
<b>Country</b>	Burundi
<b>Sector(s)</b>	Hydropower (80%), Transmission and Distribution of Electricity (20%)
<b>Theme(s)</b>	Infrastructure services for private sector development (100%)
<b>Lending Instrument</b>	Investment Project Financing
<b>Project ID</b>	P133610
<b>Borrower(s)</b>	Ministry of Energy and Mines
<b>Implementing Agency</b>	REGIDESO (Régie de Production d'Eau et d'Electricité)
<b>Environmental Category</b>	A-Full Assessment
<b>Date PID Prepared/Updated</b>	11-Mar-2014
<b>Date PID Approved/Disclosed</b>	20-Mar-2014
<b>Estimated Date of Appraisal Completion</b>	28-Feb-2014
<b>Estimated Date of Board Approval</b>	22-Apr-2014
<b>Decision</b>	

**I. Project Context**

**Country Context**

1. Since 2004 Burundi has made good progress in establishing a relatively stable macroeconomic environment, rebuilding institutions, and consolidating peace and security. Burundi has recovered from the decade long conflict, which took place between 1993 and 2003 and resulted in widespread destruction of economic and social infrastructure. Over the past decade, the Government's economic and financial programs aim to consolidate economic and political gains, promote inclusive economic growth, contain inflation, and strengthen policies designed to combat endemic poverty in rural and urban areas.

2. Gross Domestic Product (GDP) per capita is US\$164 and GDP is forecast to grow at 4.3 percent in 2013. Agriculture accounts for about one-third of GDP and provides livelihood for more than 80 percent of the population mainly in the cultivation of coffee and tea, the main cash crops. Reforms aimed at spurring economic growth include improvements to the legal and regulatory framework to enable easier business start-up, improving agricultural productivity, and promoting the mining sector.

3. Education and health outcomes improved significantly over the past few years but none of

the Millennium Development Goals will be achieved by 2015. Life expectancy rose from 43 years in 2000 to 50 years in 2011. Poverty that affects two-thirds of the population varies widely between regions and between rural and urban areas (a new household survey carried out in 2013 is expected to be available in 2014). Progress was particularly significant concerning structural reforms and policies for social inclusion, in line with the priority needs of the country.

4. The Government's priorities are laid out in the second Poverty Reduction Strategy Paper (PRSP-II) 2012 that focuses on job-creating economic growth, reducing poverty, and consolidating peace and security. The PRSP aims to transform the economy to facilitate rapid job-creating growth and food security; make growth more inclusive and sensitive to the needs of vulnerable groups; increase trade with neighbors; and develop institutions to improve governance and the quality of Government services to the public.

5. Improving the business environment is a Government priority. Since 2011 when Burundi was ranked third from bottom in the World Bank's Doing Business report it has climbed to 159th place out of 185 in the Doing Business ranking for 2013 after taking measures to reinforce investor protection (for example a new mining code was approved in October 2013) and register property. The PRSP recognizes that poor infrastructure including inadequate and costly electricity supply and inadequate regional transport connectivity are barriers to improving the business climate and private sector activity.

6. Poverty reduction and economic growth will require that progress is made in eliminating the severe power supply deficit and raising the very low access rate of households to electricity in Burundi, which at 4 percent is one of the lowest in the world.

### **Sectoral and institutional Context**

7. The main institutions in the electricity sector are the Ministry of Energy and Mines (MEM); Régie de Production et de Distribution d'Eau et d'Electricité (REGIDESO) the national public-owned electricity and water production and distribution company and the Rural Electrification Agency of Burundi (ABER). The Ministry's mandate is development of sector strategy and sector planning, and supervision of seven state enterprises including REGIDESO and ABER. REGIDESO has a position of quasi-monopoly, although the law governing the sector does not confer on it monopoly rights. The company has budgetary autonomy and is managed commercially. The Director General of REGIDESO and the company directors are appointed by the President of the Republic.

8. Electricity production is mainly through hydropower generation (84 percent) with diesel generators supplying the remainder. Production capacity includes 35 MW nationally plus 3.5 MW imported from the Société Nationale d'Electricité (SNEL), the national power utility in the Democratic Republic of Congo - Ruzizi I - and 12 MW purchased from the regional production company Société Internationale d'Electricité des Pays des Grandes Lacs (SINELAC) - Ruzizi II. The total available maximum capacity is therefore 50.5 MW in 2013. REGIDESO operates 94 percent of the nationally installed generation capacity. ABER operates seven mini-plants with a capacity of 1.52 MW and religious organizations operate plants with a total capacity of 0.29 MW, none of which are connected to the national grid. Hydropower plants in Burundi are all run-of-river (without reservoirs) except for Rwegura, resulting in additional difficulties in meeting power demand during the six-month dry season. Imports represent 42 percent of the total electricity

supply. The terms of imports are relatively favorable: the tariff charged by SNEL is US\$ 0.078/kWh and by SINELAC is US\$0.034/kWh.

9. About 10 MW rental generation units using diesel fuel have been contracted by the Government in 2013 to supplement REGIDESO owned generation capacity of 50.5 MW (of which 10.5 MW are diesels and the rest hydro) in order to narrow the supply-demand gap during peak hours (6 hours per day during weekdays).

10. There are significant opportunities for renewable energy investments in Burundi mostly in hydropower. An equatorial and mountainous country, Burundi benefits from large hydropower potential of about 1,700 MW of which approximately 300 MW is estimated to be economically exploitable. Burundi may have solar potential for pre-electrification in isolated areas. In the long term due to their high cost, hybrid solar-diesel systems and grid-connected solar PV farms may be viable substitutes for high cost diesel generation. Wind potential is limited and is more attractive for water pumping than power generation. There is good geothermal potential whose economic potential at specific sites however still needs to be confirmed through exploratory drilling.

11. The electricity access rate in Burundi is approximately four per cent in 2012. REGIDESO serves about 76,000 customers and 64 percent of these are located in and around Bujumbura. It connected 9,000 new customers in 2012. The quality and reliability of electricity service provided by REGIDESO is very poor. Available generation capacity is insufficient to meet the demand due to deferred investment in capacity. In addition, REGIDESO estimates that 60 percent of the grid requires rehabilitation or upgrading to meet interconnection standards of the East African Power Pool.

12. Although REGIDESO's financial performance has improved after tariff increases in recent years, its operational efficiency still remains inadequate. The cumulative increases in electricity tariffs in 2011 and 2012 was about 69 percent and raised the average tariff to about the equivalent of US\$0.11 per kWh in 2013. This level is below the system long run marginal cost of US\$0.14 per kWh but higher than REGIDESO's average cost of supply and revenue requirement in 2012 that was estimated at US\$0.10 per kWh. However, the effective tariff (i.e., revenue collected per kWh) is lower at US\$0.09 per kWh due to large technical and commercial losses (a result of a combination of poor condition of distribution system, metering, billing and non-payment issues).

## II. Proposed Development Objectives

The Project Development Objective is to increase the supply of clean and low cost hydropower electricity to Burundi's national grid.

## III. Project Description

### Component Name

Component A: Hydropower Facilities and Electricity Services (Total Cost US\$252 million of which IDA is US\$ 84.2 million)

### Comments (optional)

### Component Name

Component B: Technical Assistance for Physical Infrastructure (Total Cost US\$17.2 million of which IDA is US\$ 14.7 million)

**Comments (optional)****Component Name**

Component C: Power Sector Reform and Institutional Development. (Total Cost US\$4.6 million of which IDA is US\$ 1.2 million)

**Comments (optional)****IV. Financing (in USD Million)**

Total Project Cost:	270.40	Total Bank Financing:	100.00
Financing Gap:	0.00		
<b>For Loans/Credits/Others</b>			<b>Amount</b>
BORROWER/RECIPIENT			16.80
International Development Association (IDA)			100.00
African Development Bank			22.00
EC European Commission			36.60
EC European Investment Bank			95.00
Total			270.40

**V. Implementation**

13. An inter-ministerial Steering Committee will oversee the Project. The Steering Committee will be chaired by the Second Vice-Presidency and will include representatives of the Ministry of Energy and Mines, the General Manager of REGIDESO and representatives of the Ministry of Finance, Ministry of Environment, Ministry of Public Works, and Ministry of Interior. The purpose of the Steering Committee is to ensure reporting and monitoring of project implementation at a senior level of government. It would also facilitate strong inter-ministerial cooperation, where necessary.

14. REGIDESO has established a Project Implementation Unit (PIU), with the responsibility of the day to day management of the project. The PIU operates under the direction of the General Manager of REGIDESO

15. Specialists with international experience in similar projects will need to be recruited to support the PIU in key functions for which it may not be possible to recruit suitably qualified candidates in Burundi. The following key personnel will be recruited to the PIU: Project Coordinator, Technical Manager, Environmental and Social Safeguards Manager, Financial Manager and Procurement Manager. The Bank has discussed job descriptions and qualifications required for the key positions with REGIDESO. REGIDESO has submitted - as part of the draft Project Implementation Manual (PIM) - job descriptions for the key positions. Recruitment for the key positions will be through a competitive process (comparison of curriculum vitae). Job descriptions and proposed personnel for the key positions in the PIU will be subject to Bank's approval. Some positions in the PIU may be filled from outside REGIDESO and personnel with international experience appointed under contract for a fixed period (normally not less than three years). About US\$ 1.5 million from the IDA financing has been allocated to pay for such PIU

contract staff.

16. The PIU will be supported by an Owner's Engineer. The Owner's Engineer will be responsible for reviewing bidding documents, actively participate in the bidding evaluation, supervision of construction, as well as the supervision of implementation of the environmental and social mitigation measures. The Owner's Engineer will be funded by the project. The Owner's Engineer may involve seconded REGIDESO staff in training mission to strengthen their abilities in project implementation.

17. The PIU will oversee the execution of the project components and corresponding contracts for works and services. It will prepare quarterly progress reports for the co-financiers and the Steering Committee. The PIU will facilitate the coordination between the contractors, consultants and any public entity or service related to the project. The PIU will also be responsible for procurement and financial management and for the preparation of project financial reports.

18. Procurement processes will be managed by REGIDESO with the technical support of the Owner's Engineer. REGIDESO will establish sub commissions for the opening, evaluation and awarding of contracts. According to technical specifics of each contract, the General Manager of REGIDESO will nominate ad hoc members of these sub commissions. He will also sign the contracts. The PIU will organize and monitor all the procurement processes.

19. A Unit for Environmental and Social Management has been created in the PIU. At the commencement of the project, this unit will be supported by a full time senior international consultant with proven experience in both environmental and social safeguards. The Unit will oversee the implementation of mitigation measures to mitigate the social and environmental impacts of the Project. The Unit will rely on the Owner's Engineer's supervision of these activities.

20. To ensure the correct application of the safeguards policies triggered by the project, two Independent Panel of Experts will be established:

- Environmental and Social Panel of Experts in compliance with OP/BP 4.01 for a Category A Project.
- Dam Safety Panel of Experts in compliance with OP/BP 4.37.

## VI. Safeguard Policies (including public consultation)

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

**Comments (optional)**

**VII. Contact point**

**World Bank**

Contact: Kyran O'Sullivan  
Title: Senior Energy Specialist  
Tel: 5327+6374 /  
Email: kosullivan@worldbank.org

**Borrower/Client/Recipient**

Name: Ministry of Energy and Mines  
Contact: Come Manirakiza  
Title: Minister for Energy and Mines  
Tel: 77732154  
Email: comemanirakiza@yahoo.fr

**Implementing Agencies**

Name: REGIDESO (Régie de Production d'Eau et d'Electricité)  
Contact: Mr. Libérat Mfumukeko  
Title: Director General  
Tel: 25722257445  
Email: nyctekfrance@yahoo.fr

**VIII. For more information contact:**

The InfoShop  
The World Bank  
1818 H Street, NW  
Washington, D.C. 20433  
Telephone: (202) 458-4500  
Fax: (202) 522-1500  
Web: <http://www.worldbank.org/infoshop>