



**AFRICAN DEVELOPMENT  
BANK GROUP**



**NIGERIA TRUST FUND**

**PROJECT : REGIONAL RUSUMO FALLS HYDROPOWER**

**COUNTRY: MULTINATIONAL**

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## **PROJECT APPRAISAL REPORT**

**ONEC DEPARTMENT**

November 2013

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## CURRENCY EQUIVALENTS

Exchange Rate as of May 2013

UA 1	=	USD 1.509	USD 1	=	UA 0.66269
UA 1	=	EUR 1.15439	USD 1	=	EUR 0.76499
UA 1	=	RWF 952.37	USD 1	=	RWF 631.13
UA 1	=	TZS 2,400.89	USD 1	=	TZS 1,591.04
UA 1	=	BIF 2,344.40	USD 1	=	BIF 1,553.61

### Bank's Fiscal Year

1 January – 31 December

### Borrower's Fiscal Year

Burundi 1 January – 31 December

Rwanda 1 July – 30 June

Tanzania 1 July – 30 June

### Weights and Measures

m	meter	KOE	kilogram of oil equivalent
cm	centimetre = 0.01 meter	kV	kilovolt = 1,000 volts
mm	millimetre = 0.001 meter	KVA	kilovolt ampere (1,000 Va)
km	kilometre = 1,000 meters	KW	kilowatt = 1,000 watts
m <sup>2</sup>	square meter	GW	gigawatt (1,000,000 kW or 1000 MW)
cm <sup>2</sup>	square centimetre	MW	megawatt (1,000,000 W or 1 000 kW)
km <sup>2</sup>	square kilometre = 1,000,000 m <sup>2</sup>	KWh	kilowatt hour (1,000 Wh)
ha	hectare = 10,000 m <sup>2</sup>	MWh	megawatt hour (1,000 KWh)
t (t)	metric tonne (1,000 kg)	GWh	gigawatt hour (1,000,000 KWh)

### Acronyms and Abbreviations

AfDB	African Development Bank	LRMC	Long Run Marginal Cost
ADF	African Development Fund	MCC	Millennium Challenge Cooperation
BADEA	Banque Arabe pour le Développement de l'Afrique	MINECOFIN	Ministry of Finance and Economic Planning
CIDA	Canada International Development Agency	MoFEDP	Ministry of Finance and Economic Development Planning
CSP	Country Strategy Paper	NBI	Nile Basin Initiative
CTB	Coopération Technique Belge	NELSAP	Nile Equatorial Lakes Subsidiary Action Program
CV	Curriculum Vitae	NPV	Net present value
DPs	Development Partners	NSGRP-II	National Strategy for Growth and Reduction of Poverty
EA	Executing agency	NTF	Nigerian Trust Fund
EAC	East African Community	PAP	Project Affected People
EAPP	East African Power Pool	PBA	Performance Based Allocation
EDPRS-II	Economic Development and Poverty Reduction Strategy	PCR	Project Completion Report

EIRR	Economic internal rate of return	PEFA	Public Expenditure and Financial Accounting
ENPV	Economic net present value	PFM	Public Financial Management
EOI	Expression of Interest	PIDA	Program for Infrastructure Development in Africa
ESIA	Environmental and Social Assessment	PIU	Project Implementation Unit
ESMP	Environmental and Social Management Plan	PPA	Power Purchase Agreement
EU	European Union	RAP	Resettlement Action Plan
EWSA	Electricity, Water and Sanitation Authority	REGIDESO	Régie de Production et de Distribution d'Eau et d'Electricité du Burundi
FC	Foreign exchange costs	RISP	Regional Integration Strategy Paper
FIRR	Financial internal rate of return	ROR	Run of River
FM	Financial Management	ROW	Right of Way
FNPV	Financial net present value	SA	Special Account
GDP	Gross domestic product	SAI	Supreme Audit Institution
GHG	Greenhouse Gas	SBD	Standard Bidding Documents
GoB	Government of Burundi	SINELAC	Société Internationale des Pays des Grands Lacs (International Society of Great Lakes Countries)
GoR	Government of Rwanda	SME	Small or medium enterprise
GoT	Government of Tanzania	SOE	Statement of Expenditure
GPN	General Procurement Notice	SPV	Special Purpose Vehicle
GPRSF-II	Growth and Poverty Reduction Strategy Framework	TANESCO	Tanzania Electric Supply Company Limited
ICT	Information and communication technology	T-Line	Transmission line
IMF	International Monetary Fund	TOR	Terms of Reference
IFR	Interim Financial Reports	UA	Units of account
IRR	Internal rate of return	UNDP	United Nations Development Program
IFC	International Finance Corporation	UNDP	United Nations Development Program
ITF	EU – Africa Infrastructure Trust Fund	UNIDO	United Nations Industrial Development Organization
JICA	Japanese International Cooperation Agency	USD	United States Dollar
KfW	Kreditanstalt für Wiederaufbau (German Financial Cooperation)	VAT	Value Added Tax
LC	Local costs	WB	World Bank
LADP	Local Area Development Plan		



## PROJECT SUMMARY

<b>Project overview</b>	<p>The project will support the development of sustainable energy infrastructure that is aimed at increasing power generating capacity and access to electricity in the region. The project will enhance economic and social development and will also contribute to the process of regional integration by the countries developing and managing the joint assets. There are two main components: (i) an 80 MW hydropower generation plant at an estimated cost of US\$ 340 million; and (ii) transmission lines and substations at a total estimated cost of US\$ 121 million. ADB Group allocated a total of UA 64.492 million from ADF and UA 6.5 million from NTF resources. The Bank is mobilising an additional UA 10.73 million from the EU–Africa Infrastructure Trust Fund towards financing the transmission lines component from the Rusumo Falls Hydroelectric Plant to the national networks of Rwanda, Burundi and Tanzania. The 80 MW of power generated will be shared equally by the three countries. Construction is expected to be implemented and completed by August 2018. Its beneficiaries are mainly the households, industries, small and medium sized enterprises and businesses in Burundi, Rwanda and Tanzania, who will gain access to cheaper, more reliable and sustainable electricity. In addition, the power off-takers would benefit from having the opportunity to replace high cost thermal plants from their power systems, thereby lowering their cost of power generation.</p>
<b>Needs assessment</b>	<p>Currently, the power utility companies in Burundi, Tanzania and Rwanda are facing a power generation capacity shortage, which not only causes immediate concerns but also presents a risk for the region’s future economic growth. The integration of the power systems of the three countries will enable trade to address power shortages throughout the region. The project will also contribute to the countries’ social and economic development and poverty reduction efforts and is aligned to the countries’ needs as outlined in their respective Country Strategy Papers (CSP).</p>
<b>Project outcomes</b>	<p>The project will increase renewable (hydro) electricity supply capacity to address the power deficit and allow the countries to address their low energy access rates. Rwanda and Tanzania will be able to displace some of the energy generated from high cost imported fuel with cheaper hydro power; thereby contributing to the reduction of the current electricity tariff. In Burundi, the project will provide 50% of the current peak power demand and this will allow the country to expand its access and other economic activities, and reduce CO<sub>2</sub> emissions considerably.</p>
<b>Bank’s added value</b>	<p>The AfDB in collaboration with the World Bank has been playing a lead role in the preparation of the project, which has positioned the AfDB as a strategic partner in the development of regional infrastructure aimed at integration and stability. The AfDB had provided an ADF Grant of UA 2,571,210 to the Nile Basin Initiative (NBI) in 2006, to finance the technical, financial, economic and social feasibility studies for the transmission lines of the Regional Rusumo Falls Hydroelectric Plant. By providing financial support and advisory oversight, the AfDB will be facilitating the delivery of the regional project and through its involvement, be catalytic in attracting additional financial assistance from global institutions and bilateral donors. In addition, the project will complement and benefit from the synergy with the Bank’s recent interventions in the sector, such as the Regional Interconnections (NELSAP Interconnections) which aim to connect five East African countries, the Kivu-Watt methane gas power generation in Rwanda and the Ethiopia – Kenya power interconnection project. The provision of ADB Group financing for the proposed project will reinforce the Bank’s cooperation with and support for, the development programs of the three countries involved and the implementation of the pillars of the Bank’s CSP of each country and the Bank’s Energy Sector Policy, the Bank’s ten-year Strategy and the Program for Infrastructure Development in Africa (PIDA).</p>
<b>Institutional development and knowledge building</b>	<p>The project will ensure knowledge transfer, especially through project management and supervision. The knowledge transfer mechanism is important for building the in-house capacity of the power utilities, as they will manage other similar projects to meet the governments’ targets for increasing the power supply. During implementation of the project the AfDB will monitor the capacity of the power utilities during supervision missions in the assessments of the quality and timeliness of the procurement process and preparation of the audit reports. The knowledge transfer and building under this project will create a base for implementation arrangements and technologies to be used for other projects in the near future, such as for the Ruzizi III hydroelectric project which will involve Rwanda, Burundi and DRC.</p>

## RESULTS-BASED LOGICAL FRAMEWORK

Country and project name: Multinational: Tanzania, Rwanda, Burundi – Regional Rusumo Falls Hydropower Project						
Purpose of the project: To enhance power generation & transmission capacity for Burundi, Rwanda and Tanzania and contribute to regional economics, stability and integration by developing/managing joint assets						
RESULTS CHAIN	PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS/MITIGATION MEASURES	
	Indicator (including CSI)	Baseline	Target			
<b>IMPACT</b>	<b>Impact 1:</b>  Improved business enabling environment and boost economic development	GDP growth in Nile Equatorial Lakes region	<b>By 2012</b> ➤Rwanda: 7.7% ➤Tanzania: 6.9% ➤Burundi: 4%	➤Rwanda: 8% by 2020 <sup>1</sup> ➤Tanzania: >8.0% by 2025 <sup>2</sup> ➤Burundi: 10% by 2025 <sup>3</sup>	➤Bank Reports ➤Country economic data/reports ➤National economic statistics ➤IMF country review	➤Change in level of political support, political risk, will be mitigated by Government support for Program for Infrastructure Development in Africa (PIDA), Nile Basin Initiative (NBI) and East Africa Power Pool (EAPP) programs & promotion of international community involvement  ➤Macro-economic risk will be mitigated by the involvement of many donors & development partners & strong, committed regional integration.  ➤East African Governments remain committed to regional development & integration
	<b>Impact 2:</b>  Improve living conditions & socioeconomic development of the 3 countries through increased availability of affordable electricity	Reduction in the percentage of population below the national poverty line	<b>Source<sup>4</sup></b> ➤Rwanda 44.9% by 2011 ➤Tanzania 33.6% by 2007 ➤Burundi: 66.9% by 2006	➤Rwanda: < 30% by 2020 ➤Tanzania: as per the government target for the next 5 years (to 2020) ➤Burundi: 33% by 2025	➤Human Development Report ➤National economic statistics ➤IMF country review	
<b>OUTCOMES</b>	<b>Outcome 1:</b>  Improved supply capacity	Increased electricity supply capacity	<b>2012:-</b> ➤Rwanda: 110 MW, ➤Tanzania: 1431 MW, ➤Burundi: 50 MW	➤Rwanda: 563MW by 2018 ➤Tanzania: 3755MW by 2019 ➤Burundi: 246 MW by 2020	➤Ministry of Energy reports ➤National statistics ➤Project evaluations ➤Utility records	➤Construction / completion risk  ➤Power evacuation risk  ➤Off-Takers payment default risk mitigated by enforceable Power Purchase Agreements (PPAs) and by implementing measures that transform the off-takers to continuous financial sustainability.
	<b>Outcome 2:</b>  Improved access to electricity	National electrification rate	<b>2012:-</b> ➤ Rwanda 16% ➤ Tanzania 18% ➤ Burundi 6%	<b>2020:-</b> ➤ Rwanda 70% ➤ Tanzania 30% ➤ Burundi 20%	➤National statistics ➤Ministry of Energy annual reports and records ➤Joins sector review report of energy sector working group ➤Bank's energy sector review reports	

<sup>1</sup> Rwanda Vision 2020

<sup>2</sup> Tanzania Vision 2025

<sup>3</sup> Burundi Vision 2025

<sup>4</sup> UN data (<http://data.UN.Org>)

RESULTS CHAIN	PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS/MITIGATION MEASURES	
	Indicator (including CSI)	Baseline	Target			
<b>OUTPUTS</b>	<b>Component – A</b> Construction of 220 kV Transmission Lines	<ul style="list-style-type: none"> <li>➤Length of transmission lines erected</li> <li>➤Local employment created</li> </ul>	<b>By 2013:</b> N/A  N/A	<b>By 2018:</b> <ul style="list-style-type: none"> <li>- Rusumo Falls – Gitega (Burundi), 161 km;</li> <li>- Rusumo Falls – Shango/Kigali (Rwanda); 119 km</li> <li>- Rusumo Falls – Nyakanazi (Tanzania), 98 km.</li> <li>- 100% of unskilled jobs to local people of which 20% women.</li> </ul>	<ul style="list-style-type: none"> <li>- Progress reports from each Executing Agencies (EAs) and supervision and management consultant</li> <li>- Project completion report</li> <li>- Supervision mission reports from AfDB</li> </ul>	<ul style="list-style-type: none"> <li>➤Risk of completion delay and cost overruns will be mitigated by the hiring of experienced and reputable contractors on the basis of turnkey, fixed-price and time-certain contracts as well as the involvement of the supervision consultant to augment project staff as needed in order to ensure delivery efficiency (Component C).</li> <li>➤Risks of delay on procurement process will be mitigated by applying advance procurement in order to procure the supervision consultant and then the consultant will manage and handle the coordination of other procurement process.</li> <li>➤The risk of budgetary allocation for compensation of project affected peoples (PAPs) will be mitigated by strong commitment of respective governments to provide funds to their power utilities.</li> <li>➤The risk of delay and unsatisfactory completion of ESMP/RAP due to inadequate number of skilled staff will be mitigated by recruiting additional safeguard staff through the Bank's financing.</li> <li>➤Risk associated with disputes on compensation of PAPs in Tanzania for Burundi line corridor will be mitigated by signing an ESMP and RAP implementation agreement between the two governments.</li> </ul>
	<b>Component – B</b> Construction of 220 kV Substations	Number of substations constructed and extended	N/A	<b>By 2018:</b> <ul style="list-style-type: none"> <li>- Burundi: 1 new substation &amp; 1 extension</li> <li>- Rwanda: 1 new substation &amp; 1 extension</li> <li>- Tanzania: 1 new substation</li> </ul>	<ul style="list-style-type: none"> <li>- Disbursement and financial reports from the each EA</li> <li>- 4 progress reports/year prepared by the supervision and management consultant until complete implementation of ESMP &amp; RAP and LADP,</li> </ul>	
	<b>Component – C</b> <ul style="list-style-type: none"> <li>➤ Project supervision and management</li> <li>➤ Project audit</li> </ul>	<ul style="list-style-type: none"> <li>➤Number of reports</li> <li>➤Time to complete audit report (months)</li> </ul>	N/A  Six months in 2012	<ul style="list-style-type: none"> <li>➤4 progress reports per year prepared by the supervision and management consultant</li> <li>➤One audit report each year from each EA, completed in less than six months</li> </ul>		
	<b>Component – D</b> Environmental and social management	<ul style="list-style-type: none"> <li>➤Number of people compensated and resettled</li> <li>➤Number of HIV/AIDS awareness and prevention sessions</li> <li>➤Implementation of ESMP</li> <li>➤Implementation of LADP</li> </ul>	N/A  N/A  N/A  N/A	<b>By 2018:</b> <ul style="list-style-type: none"> <li>➤100% compensation and resettlement plan executed</li> <li>➤100% of contractor workers and communities sensitized about HIV/AIDS prevention.</li> <li>➤Full implementation of mitigation measures stipulated in the ESMP.</li> <li>➤Full implementation of the LADP activities.</li> </ul>		
<b>KEY ACTIVITIES</b>	<b>COMPONENTS</b>			<b>INPUTS</b>		
	<ul style="list-style-type: none"> <li>A. Transmission lines</li> <li>B. Substations</li> <li>C. Project administration and management</li> <li>D. Environmental and Social management</li> </ul>			<ul style="list-style-type: none"> <li>A. UA 51.254 million</li> <li>B. UA 16.271 million</li> <li>C. UA 8.632 million</li> <li>D. UA 4.031 million</li> </ul> <p style="text-align: right;"><b>Total cost: UA 80.188 million</b></p>		



## PROJECT IMPLEMENTATION SCHEDULE

Major Activities	2013		2014												2015												2016								2018					
	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	August	May	June	July	August		
Loan/grant approval	◆																																							
Loan/grant signature																																								
Loan/grant effectiveness																																								
Issue of GPN																																								
Procurement of consultant (EOI, TOR, RFP, & upto contract signature)																																								
Review and updating of design and bid documents																																								
Bidding period																																								
Bid evaluation, contract award																																								
Construction contracts commencement																																								
Construction implementation period																																								

## **REPORT AND RECOMMENDATION OF MANAGEMENT ON A PROPOSED FINANCING TO REGIONAL RUSUMO FALLS HYDROPOWER PROJECT**

Management submits the following report and recommendations on a proposed NTF loan of UA 6.5 million to Rwanda, an ADF loan of UA 18.884 million to Rwanda, an ADF loan of UA 22.408 million to Tanzania, and an ADF grant of UA 16.70 million to Burundi, to finance the Transmission Lines Component under the Regional Rusumo Falls Hydropower Project.

### **I. STRATEGIC THRUST AND RATIONALE**

#### **1.1 Project Linkages with Country Strategy and Objectives**

1.1.1 The development of energy infrastructure is embedded in the national development priorities of each country which are clearly articulated in their respective Bank Country Strategy Papers (CSPs) and emphasize the increase in electricity supply and the promotion of regional integration.

1.1.2 The CSP for Burundi (2012–2016) seeks to support two strategic pillars: (i) strengthening state institutions by supporting the government to undertake reforms and consolidate achievements through capacity building in governance and statistics, and (ii) infrastructure improvements through interventions to improve the infrastructure networks including improved supply and access to energy and development of basic infrastructure. In 2011, just 3% of rural and 6% of urban households in Burundi were connected to the national grid, making intervention in the energy sector crucial for the country's economic development. The Government of Burundi's (GoB) long-term development strategy, as stated in *Burundi Vision 2025*, and in the second medium-term generation *Growth and Poverty Reduction Strategy Framework (GPRSF-II)* gives top priority to development of national and regional power projects in order to achieve a significant increase in reliable and affordable electricity supply and to enhance access to electricity.

1.1.3 The CSP for Rwanda (2012–2016) seeks to support two strategic pillars: (i) infrastructure development through investments to address and eliminate the country's energy and transport bottlenecks, and (ii) enterprise and institutional capacity development by supporting institutions that implement Rwanda's policy on small and medium enterprises (SMEs). The Government of Rwanda's (GoR) long-term development strategy *Vision 2020* and the second medium-term *Economic Development and Poverty Reduction Strategy (EDPRS-II)* focuses on the increase of Rwanda's electricity generation capacity to 563 MW by 2018, by leveraging large scale private investments as the key means to achieving domestic interconnectivity and economic transformation of the economy.

1.1.4 The CSP for Tanzania (2011–2015) is built around two strategic pillars: (i) infrastructure development through interventions aimed primarily at reducing travel time between regions, integrating the national market and connecting it to other markets in the East African Community (EAC), and (ii) building an enabling institutional and business environment through interventions supporting the fiduciary environment and human resource development. The Government of Tanzania's (GoT) long-term development strategy *National Vision 2025 and Zanzibar Vision 2020* and the second medium-term *National Strategy for Growth and Reduction of Poverty (NSGRP-II)* sets its operational target to increase the electricity generation capacity to 1722 MW and electricity - coverage to increase to 18% by

2015 in order to meet its Goal-2 “*Reducing income poverty through promoting inclusive, sustainable, and employment enhancing growth and development*”.

## **1.2 Rationale for Bank’s Involvement**

The proposed project is in line with the two operational priorities of the Bank’s ten-year Strategy (2013-2022), infrastructure development and regional economic integration; and which is aimed at promoting the development of sustainable energy infrastructure to address the key constraints hindering economic transformation: the energy deficits in the countries, low energy access and high tariffs. The project is expected to contribute to the development of regional infrastructure. The Bank’s Eastern Africa RISP (2011-2015) has identified infrastructure constraints, and the consequent limits to economic growth and trade expansion, as key challenges to the integration. The proposed project is consistent with the Bank’s energy sector policy approved in October 2012 and the Bank Group Regional Integration Strategy, 2009 – 2012. The project would increase renewable (hydro) power generation capability and promote facilities for regional power interconnections. As the three countries are members of the East African Power Pool (EAPP), they are committed to future power trade opportunities with their neighbouring countries. The capacities of transmission lines under the proposed project are greater than that required to allow for future exchanges. Although regional transmission networks are not yet fully developed, multiple interconnections are being developed in the region with support from the Bank. The EAPP Regional Power System Master Plan (2011) included the proposed project in the evaluation of options for power trade. The project is prioritized under the Program for Infrastructure Development in Africa (PIDA) to consolidate regional integration. The Bank’s added value is that it will be playing a major role by providing urgently needed financial support and advisory oversight for facilitating the delivery of regional projects. The Bank will attract additional financial assistance from global and regional institutions and bilateral donors.

## **1.3 Donor Coordination**

Aid policies in the three countries have a sector-wide approach (SWAP) to help reduce fragmentation of investment flows to the energy sector through better coordination. In **Burundi**, the Ministry of Energy leads the energy sector working group in discussing future operations with Development Partners (DPs) including the AfDB; World Bank (WB); European Union (EU); KfW; German, French Development Agency (AFD), Dutch, Belgian, Chinese and Japanese International Cooperation Agency (JICA); UNDP; and India. The Bank participates in agriculture, infrastructure, human resource development and environment sectors. In **Tanzania**, DPs operate in various working groups. Key supporters in the energy sector are the AfDB, WB, EU, United States of America Millennium Challenge Cooperation (MCC), JICA, EIB, Korea EDCF, Norway, Sweden, Canada International Development Agency (CIDA), the AFD, the Netherlands, SIDA, KfW and NORAD. The Bank participates in transport, energy, agriculture, water, health and education sectors and collaborates with other DPs through General Budget Support and Public Financial Management. In **Rwanda**, the 2013 Donor Division of Labour (DoL) maps donor support to three core sectors based on a particular donor’s track record in the sector, mandate and expertise. The DoL sectors for Bank are energy, transport, private sector development (PSD) and youth employment. The Bank is a silent partner in water and sanitation and financial sector development. The Bank is also co-chair of the transport and PSD and youth employment sector working groups. The key DPs supporting the energy sector include the AfDB, Belgium, EU, EIB, WB, France, Japan,

China, India, Kuwait Fund, Saudi Fund, Arab Bank for Economic Development in Africa (BADEA), OPEC Fund, Abu Dhabi, UNIDO, UNECA, and ILO.

## II. PROJECT DESCRIPTION

The Developmental Objectives of the proposed project are to: (i) increase power availability in the region by enhancing power generation and transmission capacity for Burundi, Rwanda and Tanzania; (ii) establish and increase the volume of cross-border energy exchange; and (iii) contribute to rapid regional economic development, stability and integration by developing and managing joint assets between countries.

### 2.1 Project Components

2.1.1 The overall project has two main components: (i) construction of a hydropower generation plant for a total estimated cost of US\$ 340 million, financed by the World Bank, which entails: building an 80 MW (448 GWh/year) capacity hydropower plant that consists of civil, hydro mechanical and electromechanical works, a switchyard, recruitment of an owner's engineer, and implementing an Environmental and Social Management Plan (ESMP); and (ii) construction of Transmission lines evacuating power to the three countries, and associated substations for a total estimated costs of US\$ 121 million.

2.1.2 Given the above general information about the power plant component that is fully financed and covered by World Bank, this appraisal report (in its following sections) will be limited to elaborating on the transmission component of the Regional Rusumo Falls Hydropower project; as AfDB is the main financier of this component.

2.1.3 The transmission component of Rusumo project has four main sub-components: (i) transmission lines, (ii) substations, (iii) project administration and supervision, and (iv) Environmental and Social Management Plan (ESMP) and Resettlement Action Plan (RAP). The details of the sub-components and associated cost estimates are listed in Table 2.1 below.

Table 2.1 : Project components

N°	Component name	Estimated cost	Component Description
A)	Transmission lines	UA 51.254 million	<ul style="list-style-type: none"> <li>• <b>In Burundi:</b> construction of 161 km of 220 kV, single circuit transmission line from the power plant to existing Gitega (via Muyinga) substation;</li> <li>• <b>In Rwanda:</b> construction of 119 km of 220 kV, double circuit transmission line system (with one circuit strung), from the power plant to existing Birembo substation via new Bugesera International Airport substation;</li> <li>• <b>In Tanzania:</b> construction of 98.2 km of 220 kV, double circuit transmission line system (with one circuit strung), from power plant to new Nyakanazi substation.</li> </ul>
B)	Substations	UA 16.271 million	<ul style="list-style-type: none"> <li>• <b>In Burundi:</b> construction of a 220/30 kV Muyinga substation and extension and upgrading the existing 110 kV Gitega substation to 220 kV level or new 220 kV Gitega substation..</li> <li>• <b>In Rwanda:</b> construction of a 220/30 kV Bugesera International Airport substation and extension of existing 220 kV Birembo substation;</li> <li>• <b>In Tanzania:</b> construction of 220/33 kV Nyakanazi substation</li> </ul>

Nº	Component name	Estimated cost	Component Description
C)	Project administration and supervision		
	C1) Consultancy service for project supervision & management	UA 7.135 million	<ul style="list-style-type: none"> <li>Review and update of the technical designs for the construction of the Transmission Lines and substations; development of the bidding documents; assist the EAs in the procurement process, supervision of construction, and supervision of the RAP.</li> </ul>
	C2) Audit	UA 0.199 million	<ul style="list-style-type: none"> <li>Implement annual auditing of the project accounts</li> </ul>
	C3) Project administration	UA 1.298 million	<ul style="list-style-type: none"> <li>The capacity and capability of the project implementation team in each EA will be reinforced through recruitment of additional staff (engineers, accountant, procurement specialist, environmentalist and social experts).</li> </ul>
D)	Environmental and Social management plan	UA 4.031 million	<ul style="list-style-type: none"> <li>The Project has been classified as Category-1 under the AfDB environmental and social assessment procedures. This sub-component consists of implementation of the agreed mitigation measures and compensation to people affected by the project.</li> </ul>

## 2.2 Technical Solutions Adopted and Alternatives Considered

2.2.1 The power generation source chosen as an option for providing additional power supply to address the power shortage experienced in the three countries, is that of constructing the power plant, with a Run-of-River (ROR) design scheme that is simple to construct, less costly (least cost implementation of the ESMP, RAP and construction) than the other considered options, and utilizes the maximum water head available at Rusumo Falls without creating an impoundment. The water flow will be controlled by a gated combined dam/spillway. Several alternative options that had been considered and compared with the ROR scheme, but were rejected, include: (a) “no project”; (b) “alternative technology”; (c) “full development scheme that requires a major dam/reservoir”; and (d) “intermediate development scheme” with reduced reservoir and head pond level.

2.2.2 In regard to the design of the transmission system, the preferred solution is the construction of 220 kV voltage level T-lines to evacuate the power from the generation plant. The alternative options of “no project” and “lower voltage levels” were rejected.

Table 2.2: Project alternatives considered and reasons for rejection

Alternative	Brief description	Reason for rejection
<b>Power generation component</b>		
No project	Implies preserving the existing situation of severe deficit in electricity production, and leaving the countries to continue to face an increasing power demand, with reliance on wood and fossil fuels, which is a high cost and polluting resource, for power generation.	<ul style="list-style-type: none"> <li>The need for wood for household cooking and lighting will rapidly increase the rate of deforestation, promote, environmental pollution, health and social impacts on the population.</li> <li>Reduced rate of economic development;</li> <li>continued use of high cost fossil fuels for power supply;</li> <li>continued increase in the rate of diminishing forest resources to provide wood for cooking fuel and heating;</li> <li>Continued increase in greenhouse gas emissions resulting from the combustion of fossil fuels and biomass in association with an increasing population.</li> </ul>
Alternative technology	Requires using hydrocarbon as a source of fuel in thermal power plant(s) to produce the equivalent of the Rusumo Falls project power/energy.	<ul style="list-style-type: none"> <li>consequences for air quality pollution from emissions of Greenhouse Gases (GHG)</li> <li>Hydrocarbon resources are not available in the area and the fuel for such a thermal power plant would be very expensive since it will have to be bought on the international market with scarce foreign exchange.</li> </ul>

Alternative	Brief description	Reason for rejection
Full development scheme	full development scheme will require building a reservoir that produces 507 GWh of annual generation of electric energy	<ul style="list-style-type: none"> <li>• 263 villages will be impacted</li> <li>• 9,152 ha of agricultural land will be lost 17,450 of households will be affected and displaced by construction and reservoir impoundment</li> <li>• High overall investment cost</li> </ul>
Intermediate development scheme	This development scheme requires a reduced reservoir and head pond level controlled by a spillway structure that houses four radial gates. The annual electric energy generation will be 497 GWh	<ul style="list-style-type: none"> <li>• 7,330 households will be affected by construction and reservoir impoundment</li> <li>• 167 villages will be impacted</li> <li>• 2,228 ha of agricultural land will be lost</li> <li>• High overall investment cost</li> </ul>
<b>Transmission component</b>		
No project	Implies no transmission systems constructed and/or no Rusumo hydroelectric generation plant built	<ul style="list-style-type: none"> <li>• Without the transmission lines and associated substations the power generated from Rusumo could not be transmitted.</li> <li>• No additional power exchange between these three countries</li> </ul>
Lower voltage system	Use of lower voltage transmission systems (110 kV or 132 kV) capable only to transmit the 26.7 MW to each country	<ul style="list-style-type: none"> <li>• Even though the 110 kV or 132 kV transmission line would be sufficient to evacuate the Tanzanian share of energy/power from Rusumo, the 220KV lines will provide less transmission losses. Because of the long line length for Rwanda and Burundi, 220 kV is justified to reduce transmission losses.</li> <li>• The stability of the interconnected network linking the generation and transmission of Rwanda, the East DRC, Burundi and Tanzania with lower voltage system will not be improved.</li> <li>• To leverage the benefits of the project to allow regional power trade beyond the Rusumo generation capacity, high voltage transmission lines are required.</li> </ul>

## 2.3 Project Type

This development is a transformative generation and transmission regional integration project that would enable the participating countries to jointly have access to the benefits of the large and diverse potential of the region's energy sources. It will enhance their ability to attract investments for large-scale power developments. The project is a co-financed operation by the WB, AfDB Group and ITF. The AfDB Group will finance the transmission system component through a mix of ADF loans, an ADF grant, an NTF loan, and an ITF grant. WB will finance the power generation plant component.

## 2.4 Project Cost and Financing Arrangements

2.4.1 The Bank Group will provide 80.42% (from ADF and NTF resources) of the total financial requirement for the transmission component; 13.22% will be financed by ITF and the remaining 6.35% by the three Governments. The WB (IDA's concessional window) will provide about US\$340 million for the power plant Component. This appraisal report only details cost, implementation and financing arrangements for the transmission component of the overall project, as the power plant component is fully financed by the WB.

2.4.2 The total cost for the transmission component, including physical and price contingencies of 7.5% (excluding all taxes, duties, levies, and VAT in the respective

countries), is estimated to be USD 121 million (UA 80.188 million), comprising foreign exchange costs of USD 96.773 (UA 64.131 million) and local costs of USD 24.231 million (UA 16.057 million). Table 2.3 presents the transmission foreign and local currency costs.

Table 2.3 : Project cost by component

Component	USD million				UA million			
	Burundi	Rwanda	Tanzania	Total	Burundi	Rwanda	Tanzania	Total
A) Transmission lines	27.048	24.276	20.622	71.941	17.924	16.087	13.666	47.677
B) Substations	7.650	8.140	7.050	22.840	5.070	5.394	4.672	15.136
C) Project administration and management	4.567	4.128	4.331	13.026	3.026	2.735	2.870	8.631
D) Environmental and Social management	3.196	1.273	1.190	5.659	2.118	0.844	0.789	3.751
<b>Total base cost</b>	<b>42.461</b>	<b>37.817</b>	<b>33.193</b>	<b>113.471</b>	<b>28.138</b>	<b>25.061</b>	<b>21.997</b>	<b>75.196</b>
Physical and price contingencies (7.5% of A, B & D)	2.842	2.527	2.165	7.534	1.883	1.674	1.434	4.991
<b>Total cost</b>	<b>45.303</b>	<b>40.343</b>	<b>35.358</b>	<b>121.004</b>	<b>30.022</b>	<b>26.735</b>	<b>23.431</b>	<b>80.188</b>

2.4.3 The sources for financing the project are illustrated in Table 2.4. The Bank Group (ADF and NTF) financing will be used to cover 83.47% of the total foreign cost and 68.28% (from ADF only) of local costs of the transmission component of the project excluding all taxes, duties, levies, and VAT in each country. ITF financing will be used to cover the remaining 16.53% of the total foreign cost. The financial contribution from the three Governments will cover the remaining 31.72% of the total local costs. The financing expenditure schedule by component is provided in Table 2.6.

Table 2.4 : Sources of financing for foreign and local costs

Source of Financing	UA million			% of total cost
	Foreign costs	Local costs	Total	
ADF	47.028	10.964	57.992	72.32%
NTF	6.500	0.000	6.500	8.11%
ITF	10.603	0.000	10.603	13.22%
Government of Burundi	0.000	2.719	2.719	3.39%
Government of Rwanda	0.000	1.351	1.351	1.68%
Government of Tanzania	0.000	1.023	1.023	1.28%
<b>Total project costs</b>	<b>64.131</b>	<b>16.057</b>	<b>80.188</b>	<b>100%</b>

Table 2.5: Project cost by category of expenditure

Category of expenditure	UA million			% foreign costs
	Foreign costs	Local costs	Total	
<b>Works</b>				
➤ Transmission lines	43.564	7.688	51.252	85.00%
➤ Substations	14.013	2.259	16.272	86.12%
<b>Goods</b>				
➤ Procurement of vehicles for the PIUs	0.000	0.448	0.448	0.00%
<b>Services</b>				
➤ Project supervision and management	6.422	0.714	7.136	89.94%
➤ Audit service	0.000	0.198	0.198	0.00%
<b>Operating costs</b>				
➤ Project administration and operating expenses	0.132	0.718	0.850	15.53%
<b>Others</b>				
➤ Environmental and Social management	0.000	4.032	4.032	0.00%
<b>Total cost</b>	<b>64.131</b>	<b>16.057</b>	<b>80.188</b>	<b>79.98%</b>



Table 2.6 : ADB Group (ADF & NTF) and ITF Co-financing Expenditure schedule by component

Component	Expenditure per year (UA million)					
	2014	2015	2016	2017	2018	Total
A) Transmission lines	0.000	0.000	12.622	25.244	12.622	50.488
B) Substations	0.000	0.000	3.994	7.988	3.994	15.975
C) Project administration and management	1.457	1.714	1.793	2.395	1.273	8.632
<b>Total</b>	<b>1.457</b>	<b>1.714</b>	<b>18.409</b>	<b>35.627</b>	<b>17.889</b>	<b>75.095</b>
<b>Cumulative</b>	<b>1.457</b>	<b>3.171</b>	<b>21.580</b>	<b>57.206</b>	<b>75.095</b>	

## 2.5 Project's Target Area and Population

2.5.1 The small dam and the power plant are situated at the Rusumo Falls on River Kagera, where the river forms the boundary between Tanzania and Rwanda and about 2km downstream of the river's confluence with River Ruvubu. The T-lines transverse each of the involved countries from the power plant to the receiving end substations. The Tanzania T-line routing is from the power plant to Nyakanazi in the north-western part of Tanzania. In Rwanda, the T- line is from the power plant to Birembo passing through new Bugesera International Airport substation. The Burundi T-line runs from the power plant through Tanzania territory to Ngara at the border of Tanzania, and then crosses the border of Tanzania to Muyinga in Burundi and continues to Gitega in central Burundi. According to the projections, the combined population of the area traversed by the lines is estimated to be: Rwanda 410,485 (206,063 women), Burundi 632,409 (319,367 women) and Tanzania 496,590 (250,778 women).

2.5.2 The key project beneficiaries are the households, small and medium sized enterprises, artisanal and mining operations located in the project area. The power off-takers and local schools, health centers, administration, etc. would benefit from this project by: (a) the opportunity to replace high cost thermal plants and lowering their overall cost of power generation; and (b) improving their ability to better meet the peak loads on their national power systems from a less expensive power source.

## 2.6 Participatory Approach

The project has been selected following extensive evaluation of power needs in the three countries. In 2005, all the Ministries responsible for Energy pledged, in a joint communique, to implement the Rusumo Falls Hydro Power Project based on the results and recommendations of the regional power needs assessment, regional power strategic development plan and investment prioritization studies carried out by the Nile Basin Initiative (NBI). Subsequently, in 2006, the three countries signed a joint project development agreement. In addition, during the preparation of the ESIA and the RAP, further consultations were carried out where affected and interested parties were able to express their views and concerns. Focus group discussions were conducted which included affected persons and communities, potential consumers of electricity, government officials and agencies (see Annex B8.2).

## 2.7 Bank Group Experience and Lessons Reflected in Project Design

2.7.1 At the end of May 2013, the Bank's portfolio comprised 18 operations in Burundi, 23 operations in Rwanda and 32 operations in Tanzania. These included several sovereign loans/grants and private-sector operations, for a total commitment of UA 242 million for



Burundi, UA 280.75 million for Rwanda and UA 1,002 million for Tanzania. The Bank's portfolio disbursement rate by country shows that Burundi has disbursed 34.56% of the total commitments, Rwanda about 44.2% and Tanzania about 31.22% (see Appendix II).

2.7.2 The AfDB's preparation and appraisal of the proposed project has been cognizant of lessons learned from the Bank's on-going projects and other recently concluded interventions in the three countries, and these have been incorporated in the proposed project's design. The lessons learned are detailed in Annex B1.

2.7.3 The lessons learned from the Bank's on-going and past interventions mainly relate to: (i) project readiness and quality at entry; (ii) project start-up and implementation delays due to ineffective institutional arrangements and delays in fulfilling all the conditions precedent to the loans, grant effectiveness and the first disbursement; and (iii) delays in implementing procurement activities due to continuous changes in project design after project approval, poor quality and inconsistent procurement documents prepared by the EAs, which had caused delays in the issuance of no-objection by the Bank. The proposed project takes these lessons into account by:

- ***Project readiness and quality at entry:*** the proposed project is supported by complete and appropriate design, feasibility, ESIA, ESMP, and RAP studies.
- ***Project start-up and implementation delay:*** Effective project's implementation requires strong capacity and capability by the EAs. Although the implementation of the proposed project would rely on the PIUs of REGIDESO, EWSA and TANESCO, the capability of the PIUs will be reinforced with additional staff to ensure strong implementation capacity under the project. In addition, the conditions precedent to the effectiveness of the loans and grant; and in fulfilling the requirements for the first disbursement will be easily achievable and implementable as a result of the thorough preparation work and analysis undertaken by the borrowers/recipient.
- ***Timely implementation of procurement activities:*** There will be effective follow up and control by the Bank to avoid any project design changes from the agreed scope and specifications at appraisal stage. In addition, the proposed project will minimize such delays through the selection of experienced consulting firms to assist the EAs in the preparation of design, specifications and bidding documents.
- ***The lessons learned from other similar regional projects are assessed and the proposed project incorporates them into its design:*** Ruzizi II, a similar publicly-financed tri-national project, suffered from political interference and payment default. SINELAC, responsible for operating and managing Ruzizi-II on behalf of the countries encountered operational, financial and institutional challenges. Operational problems were due to the appointment of management and staff to SINELAC by the three countries. The financial problem was because of the payment default by the off-takers. To avoid these problems, the proposed project has created a special purpose vehicle (SPV) owned by the three governments through a conventional shareholding structure which mirrors arrangements in privately financed projects. The SPV will own the power plant, and its operation and maintenance will be subcontracted to a competent private sector entity. The viability of the SPV is going to be ensured through a "take or pay" PPA with each utility having to pay for a third of the output, irrespective of whether it is going to consume this energy or not. This would ensure that the SPV will receive enough cash flow to cover its fixed costs. In addition, it is envisaged that each off-taker is going to provide a guarantee (through an

escrow account or a line of credit) to secure payments equivalent to a 6-month period under the PPA.

## **2.8 Project's Performance Indicators**

2.8.1 The key outcome indicators will be a significant increase in electricity supply and access to electricity in the three countries, increased regional cross-border power trade, reduced cost of power generation by the executing agencies and the reduction of CO<sub>2</sub> emissions (in tons) from the three countries due to the replacement of thermal plant.. The main deliverables and output indicators of the project are:

- construction of: (i) a 161 km of 220 kV transmission line for Burundi, (ii) a 119 km of 220 kV transmission line for Rwanda; and (iii) a 98 km of 220 kV transmission line for Tanzania, from the Regional Rusumo falls hydroelectric power plant;
- construction of: (i) one new substation and the extension of one existing substation in Burundi, (ii) one new substation and the extension of one existing substation in Rwanda; and (iii) one new substation in Tanzania.

2.8.2 Project targets will be monitored through baseline data to be collected by the supervision consulting engineer, EAs and contractors throughout project implementation. The indicators to be collected will include results on employment of local communities and women, income and livelihood restoration program, HIV/AIDS, implementation of RAPs; all data shall be gender disaggregated.

## **III. PROJECT FEASIBILITY**

### **3.1 Economic and Financial Performance**

3.1.1 In order to determine the impact of the proposed investment, the Bank developed a financial and economic model, based primarily on data from project technical feasibility studies prepared by SNC-Lavallin and Fichtner. The analysis has been conducted by considering both the power plant and transmission components in order to assess their combined impact. The financial and economic indicators were computed at each country's level but also aggregated for the entire project.

3.1.2 The results of the analysis show that the project is financially sustainable and economically viable. Its financial internal rate of return (FIRR) is estimated at 23.16% (real) while the financial net present value (FNPV) discounted at a weighted average cost of capital of 8 %, is US\$ 153.60 million. These figures were obtained on the basis of current average tariff of US\$ 0.09, US\$ 0.21 and US\$ 0.14 per KWh charged to residential consumers in Burundi, Rwanda and Tanzania, respectively.

3.1.3 The economic benefits of the project are computed by considering the long run marginal cost (LRMC) of serving an additional kWh of demand in each country. According to the data available from the feasibility studies, the LRMC is estimated at US\$ 0.257/kWh in Burundi; US\$ 0.229/kWh in Rwanda and US\$ 0.148/kWh in Tanzania. At the aggregate level, the project will yield a high economic internal rate of return (EIRR) of 40.89% (real) and an economic net present value (ENPV) discounted at the opportunity cost of capital of 12% (real), estimated at US\$ 200.53 million.

3.1.4 The main financial and economic results are summarized in Table 3.1 below. The detailed calculations and assumptions are presented in Annex B7.

*Table 3.1: Key financial and economic indicators*

	Burundi	Rwanda	Tanzania	Overall Project
FIRR	6.15%	43.15%	21.58%	23.16%
FNPV (@8%) - US\$ million	7.71	87.99	28.01	153.60
EIRR	49.54%	49.87%	19.05%	40.89%
ENPV (@12%) - US\$ million	100.53	85.62	14.38	200.53

3.1.5 A sensitivity analysis was also performed against the key risk variables of the project to test the robustness of its financial and economic cash flows. The identified key risks include an increase in investment costs, an increase in operating costs, an increase of the PPA price and a reduction in revenues, through a reduction in the end-user tariff. The results of the sensitivity analysis show that the financial and economic results are robust under adverse conditions and that the metrics of the project are more sensitive to a change in end-user tariffs and PPA price than a change in investment cost or operating and maintenance costs. These details are provided in Annex B.7.

## **3.2 Environmental and Social Impacts**

The project has been validated as category-1 given its potential environment and social impact as it involves the installation of 220 kV transmission lines over a total distance of 372 km with a right-of-way (ROW) of 30m. An ESIA, ESMP and full RAP were developed in 2012. The ESIA and RAP summaries were posted on the Bank’s website since 8 July 2013.

### **3.2.1 Environment**

The major environmental and social impacts include involuntary resettlement, acquisition of land, impacts on vegetation, damage to cash crops and property. The project may affect up to 18,600 trees. The installation of towers, new substations and new sites for relocation would require about 45 hectares of land. The entire surface of the T-lines corridor (30 m ROW) of 1,115.7 ha will not have to be expropriated in Burundi and Rwanda. The entire ROW will be expropriated in Tanzania (448 ha) but agricultural practices shall be allowed to continue within the ROW. The environmental impacts will be mitigated and enhanced by the application of several measures detailed in the ESMP which include re-vegetation, soil conservation, wildlife and avifauna protection measures, and awareness programmes, monitoring etc. The estimated cost of the ESMP implementation is USD 1.08 million over the 2 year construction and first 5 years of the operation period. This cost is included in the project’s overall budget.

### **3.2.2 Climate Change**

The project will directly contribute to climate change mitigation and the more immediate issue of adaptation to the communities and the countries as a whole. The project will provide access to energy for improved economic activities, which is pivotal to climate change adaptation. With respect to mitigation, the project is linked directly to the evacuation of electricity from a run-of-river hydroelectric plant, which will avoid the continued increase in GHG resulting from the combustion of fossil fuels and biomass in association with an

increasing population. The project will also involve a reforestation programme, which will entail the planting of twice the number of trees impacted by the project at a cost of USD 150,000. The trees planted will be owned by the communities and would also improve their economic livelihood and adaptation to climate change. This cost has been included in the financial analysis of the project as part of the project cost. Other adaptation measures that are specific to the project's engineering design have been considered in its feasibility analysis.

### **3.2.3 Gender**

3.2.3.1 Many factors have contributed to a remarkable transformation of gender relations and roles in the three countries. National Gender Policies are in line with the Governments' sustainable development agendas. The project is expected to impact both genders positively by availing electricity in rural areas served by the substations and through the additional power to the national grid that will facilitate rural electrification programs. The project will reduce hardship for women and girls in collecting fuel wood. Lighting and the use of appliances will contribute to household wellbeing, though only a few rural communities can afford electricity for cooking. Girls' education performance is notably lower than that of boys in the project areas and is partially attributed to girls' household chores. Electricity will provide lighting for night studying and allow girls to attend evening classes with lit up streets. Electricity boosts the chance for women economic empowerment through establishing food processing cottage industries. During construction women will be given employment opportunities (20% of unskilled jobs). This was widely presented during public consultations. Women will also be able to provide other services such as catering and cleaning to campsites.

3.2.3.2 The potential exists for HIV/AIDS to spread to local communities due to the influx of male construction workers or employment seekers. Rural incidence rates are low (2.5% in Burundi) but women and girls are 56% more likely to contract HIV/AIDS than men. The project has included awareness and prevention programs for workers and communities in the project areas focussing on women and girls. Approximately 70 (Burundi 31, Rwanda 26, Tanzania 13) female households will be affected by resettlement and disturbance during implementation. The project has built special assistance into the support mechanisms to vulnerable groups. While encouraging employment of women in construction camps, there is the danger of sexual abuse and exploitation. To curb this, the service provider for the HIV/AIDS also provides gender related awareness and mainstreaming for workers and communities and ensuring that the contractor prepares and implements a code of conduct which includes elimination of abuse and exploitation of women workers.

### **3.2.4 Social**

3.2.4.1 Agriculture accounts for 80% of economic activity in project areas but land scarcity (especially in Rwanda and Burundi) implies a demand for non-agricultural employment. Growth in industrial and service sectors is hampered by poor infrastructure. The project facilitates rural electrification programs which support economic diversification and employment creation and results in improved quality of life and transformation through benefiting small-scale handicraft units and workshops; small-scale businesses; power provisions to schools and hospitals; water pumping; saw mills and joineries operations; grain mills and other agricultural processing and storage businesses; use of computers for data management; banking services; enhanced communication systems (internet access, mobile phones, radio, television); electric street lighting; hospitality and tourism facilities; etc. (see summary analysis of ability and willingness to pay, Annex B8). The results also include social

and environmental cost reductions, not least in noise and air pollution associated with existing generator usage, and lower requirements for firewood cutting and collection.

3.2.4.2 On-going transport system improvements undertaken in the project areas will enhance the benefits of rural electrification facilitated by the project. The road networks from Kigali to the border of Burundi via Nyakarambi; the new connection from Kigali via Kirundo (Burundi) and Ngozi-Kayanza up to Bujumbura; and from Karuzi to Gitega will increase the marketing facilities of the region crossed by the chosen transmission line routes. In Tanzania, Ngara District and three important local centres of Kabanga, Benaco, and Nyakanazi present important road stations that will benefit from electricity; and so will the scheduled railway between Dar es Salaam and Kigali.

3.2.4.3 During project implementation, the project is expected to create at least 1,077 jobs (80% being offered to local communities). In addition, indirect jobs will be created through the provision of materials and services to construction works and sites. Aside from the potential for the spread of communicable diseases, tension could arise over access to resources such as water and accommodation around construction camps. The project shall include in its design awareness and prevention programs to curb the spread of disease and control for malaria. Complementary initiatives in the project area will be implemented through the Local Area Development Plan (LADP). Activities include rural electrification through solar power stations and kiosks; drinking water supply; re-planting of trees and fruit trees; creation of revolving funds through the 1-cow-per-family program; a savings and investment program linked to the compensation of PAPs focusing on women; and legal support for vulnerable PAPs and women when in dispute. A total of USD 1.95 million has been allocated by the three countries for the LADP (see Annex B8).

### **3.2.5 Involuntary Resettlement**

The project shall result in involuntary resettlement due to clearance of the ROW of 30 m and cutting down shrubs and trees with a height of more than 3 m. Hence routing the T-lines through built up areas, woodlots, public buildings, gardens, etc. will result in relocation and compensation of affected persons. Efforts were made to minimize impacts and in cases where this was not possible affected persons and properties will be resettled and compensated in accordance with the Bank's Involuntary Policy which has culminated into preparing a full RAP covering the three countries. From the RAP, it is estimated that 10.41ha of land will be required for tower foundations; 13.671ha for 5 substations; a total of 18,600 trees will be affected; 382 housing structures involving 1934 persons shall be affected including those severely affected; and 1279 agricultural plots; among others. A total budget of USD 6,083,000 (Rwanda USD 1,368,400, Tanzania USD 1,278,773 and Burundi USD 3,435,827 which includes the line portion in Tanzania) will be used spent to compensate these losses. In addition, it is estimated that the livelihood restoration budget is USD 1,950,000 for the three countries. The RAP and livelihood restoration budgets are an integral part of the project cost and each EA shall allocate adequate budget for the particular year of RAP implementation.

## **IV. PROJECT IMPLEMENTATION**

### **4.1 Implementation Arrangements**

4.1.1 *Institutional Arrangements*: The transmission facilities will be financed mainly by AfDB through ADF loans and grants. The borrower and recipients of the proposed ADF loan

and grant for the construction of the T-Lines components (transmission lines and substations) will be the respective Governments of the involved three countries. The funds will be made available by AfDB to the countries through the relevant Ministry (Ministry of Finance and Economic Development Planning (MoFEDP) in Burundi; Ministry of Finance and Economic Planning (MINECOFIN) in Rwanda and Ministry of Finance in Tanzania). The Executing Agency (EA) of the T-Lines component will be the power utilities of the three countries (REGIDESO in Burundi; EWSA in Rwanda and TANESCO in Tanzania). The existing Project Implementation Units (PIUs) within each EA will be the implementing team for the Rusumo transmission component. The PIUs will report to the management of their respective organizations and they will be primarily responsible for facilitating, monitoring, evaluating, and reporting on project activities and progress.

4.1.1.1 In assessing the capacity of each PIU to implement the proposed project, it is noted that they have gained adequate technical and managerial experience through implementing projects financed by the Bank Group and other donors. However, as each PIU manages several projects, they will face a significant burden to control, monitor, and supervise the proposed project as required; and hence, further strengthening of the existing PIUs is needed. The PIUs will be reinforced with additional and sufficient staff to run the proposed project and also will be assisted by a supervision consulting firm procured under this project. Each EA will submit the curriculum vitae (CVs) of one environmentalist, one procurement specialist, one social expert, one transmission line engineer, one substations engineer, one civil engineer, and one accountant to be assigned to the proposed project for the Bank's approval. The detailed implementation arrangements, responsibilities of the PIUs and the profiles of the additional staff for the project team are given in Annex B.3.

4.1.2 **Procurement Arrangements:** All procurement of goods, works, and the acquisition of consulting services financed by the Bank will be in accordance with Bank's Rules and Procedures: "*Rules and Procedures for the Procurement of Goods and Works*" dated May 2008 (revised July 2012); and "*Rules and Procedures for the Use of Consultants*" dated May 2008 (revised July 2012), as amended from time to time, using the relevant Bank standard bidding documents, and the provisions stipulated in the Financing Agreement. The EAs will be responsible for the procurement of goods, works, and consultancy services. The overall project risk rating for procurement is high and can be mitigated to moderate with appropriate measures to be put in place. The high risk rating is mainly due to the multiplicity of the EAs with varying resources, capacity and expertise to carry out procurement. In order to mitigate the risks, additional procurement specialists will be recruited by the PIUs as described in 4.1.1.1 above. The supervision consulting firm will be recruited to provide the overall project supervision and management services, which will include designing the construction of the transmission lines and substations and assisting the PIUs in procuring the contractors. The consulting firm will have in his team a procurement specialist who will work closely with each of the PIU's procurement specialists during the procurement process. The Boards are further requested to approve a waiver of the eligibility requirements with respect to the country of origin of goods and works under the NTF so as to apply universal procurement in line with ADF provisions. This is because ADF and NTF resources are financing activities jointly which cannot be packaged separately. Details on procurement arrangement are provided in Annex B5.

4.1.3 **Financial Management: In Burundi,** REGIDESO will be accountable for the funds and financial reporting through its Managing Director, who will be responsible for the accounting and financial reporting under the project. REGIDESO has very weak capacity and

the FM Risk rating is high but will be reviewed once the FM Action Plan is fully implemented. It is proposed that a project accountant within existing PIU under REGIDESO to handle the financial transactions. REGIDESO will make use of its Delta Compta integrated financial system for the project accounting. *In Rwanda*, EWSA (through its Chief Finance Officer) will be accountable for the funds and financial reporting and has the requisite capacity with a moderate residual risk rating. EWSA will use its existing TOMPRO system. *In Tanzania*, TANESCO will be accountable for the funds and financial reporting (through its Managing Director) and has the requisite capacity. TANESCO will use the ISCALA accounting system. The FM risk assuming full implementation of the FM Action Plan is moderate. All the three EAs will be required to produce and submit quarterly IFRs to the Bank (in a uniform format to be agreed by negotiations) no later than 45 days after the end of each quarter. At the end of each financial year and at the end of the project, each entity will produce financial statements (FS) in a format to be agreed on and will be subject to audit. The financial year end for Rwanda and Tanzania is 30 June while for Burundi it is 31 December. The Bank's supervision missions will be conducted at least twice every year based on the risk assessment of each EA. The mission's objectives will include that of ensuring that strong financial management systems are maintained for the project throughout its life. Reviews will be carried out regularly to ensure that expenditures incurred by the project remain eligible for ADB Group funding. A detailed assessment of the financial management is provided in Annex B.4.

**4.1.4 Disbursement:** It is envisaged that the Special Account (SA) and the direct payment methods of disbursement will be the most applicable of the possible four methods. The project will operate one foreign special account into which the proceeds of the loan will be deposited and further to a local currency special account. Both accounts will be opened at Banks acceptable to the AfDB and will be made a condition precedent to first disbursement of the loans. An initial disbursement will be deposited in the project SA in foreign currency based on a six month cash flow forecast for the project and based on the agreed work plan approved by the Bank through the initial Withdrawal Application to the Bank after the effectiveness of the project. Actual expenditures will be replenished through submission of Withdrawal Applications (at least quarterly) supported by Statements of Expenditures (SOE) while the direct payment method will be used for equipment, supplies and services payments (including audit and consultancy). The Bank's Disbursement Letter will be issued stipulating key disbursement procedures and practices. A detailed of disbursement is provided in Annex B.4.

**4.1.5 Audit:** For Rwanda and Tanzania, the Supreme Audit Institution (SAI) will be responsible for the audit. However, TANESCO and EWSA may use competent Private auditors acceptable to the Bank and the respective SAI for the audit. For Burundi, the REGIDESO will appoint a competent private auditor acceptable to the Bank to carry out the audit of the project. The audit terms of reference for all the three implementing agencies will be agreed with the Bank before negotiations. The 3 separate audit reports each completed with a Management Letter will be submitted to the Bank no later than six months after the end of each financial year and at the end of the project. Where the audit is carried out by a private auditor, the cost of the audit will be borne by the project funding. Because the EAs also generate their own income, their entity audit reports will be required to ascertain viability.

## **4.2 Project Monitoring and Evaluation**

**4.2.1** Regular monitoring and reporting on the project implementation progress will be the responsibility of each PIU within each EA. The PIUs will have the responsibility to supply

current data for verification against the set of agreed performance indicators, at minimum: (i) on an annual basis for project outcome indicators, (ii) on a quarterly basis for performance targets based on the output of each of the components of the project and propose corrective actions, (iii) on an annual basis for audit reports, and (iv) biannually ESMP compliance reports. These reports shall cover all aspects of project implementation, including the status of progress against agreed implementation and disbursement schedules for all components; implementation of environmental and social mitigation measures; and the status of fulfilment of the loan conditions. The audit report will be prepared by each EA. These actions will be complemented by close monitoring by the Fund on the implementation of the project with twice-yearly technical and financial supervision missions and reviews of annual audit reports.

4.2.2 The Bank will undertake a midterm review of the project approximately 24 months after the effectiveness of the loan and grant. The execution of the ESMP and RAP will also be monitored during all stages of the project by each PIU, and through the Bank's supervision missions. The supervision consultant shall also prepare and submit final commissioning reports to the PIUs and the Bank at the completion of its assignment. Within six months of the completion of the project, each EA will prepare and submit a Project Completion Report (PCR), which would serve as input in the preparation of the Bank's own PCR.

### **4.3 Governance**

4.3.1 Each EA is managed by a Board of Directors composed of the Director General (DG) / Managing Director (MD) of each EA and representatives from various Ministries and Government organizations. The financial management arrangements at REGIDESO, EWSA and TANESCO are considered adequate to ensure that project resources are used for the purposes for which they were granted, with due consideration for efficiency and economy. This project will be implemented as follows: (i) in Burundi, it would be in line with Burundi's public expenditure and financial accountability (PEFA) system; (ii) in Rwanda, it will be in line with the country's Public Financial Management (PFM) system; and (iii) in Tanzania, it will be in accordance with Tanzania's PEFA system. The internal control system in REGIDESO needs improvement and this will be achieved through the recruitment of an internal auditor with a clear mandate to undertake the ex-post review of transactions and ensure compliance with the relevant financial policies and procedures. EWSA has an Internal Audit directorate headed by a Chief Internal Auditor who reports to the Board of Directors and administratively to the DG of the entity. TANESCO has an Internal Audit Department headed by the Chief Internal Auditor who reports administratively to the MD and functionally to the Audit committee of the Board of Directors of the entity.

4.3.2 Project operations will be guided by all existing procedures and manuals, such as the finance manual. The main risk to project governance arises in procurement decisions. In Burundi, the Bank's assessment of REGIDESO noted weaknesses over the external oversight and audit environment in relation to the independence of SAI (La Cour des comptes) which is not defined in the law as it lacks legal status. This risk will be mitigated, as the external oversight will be provided by a private competent auditor acceptable to both the Burundian Government and the Bank. In Rwanda and Tanzania, anti-corruption measures that pertain to government activities and the utilities will apply to this project and external oversight will be provided by the respective Auditor Generals. In Tanzania, the implementation of the project will be guided by all the operational manuals of TANESCO with regard to construction, maintenance and operation of T-lines. The Bank will also provide some oversight, especially during supervision missions. There will be at least one completed and acceptable Value for



Money audit at mid-term or when substantial work has been undertaken. Follow-up activities will be made to ensure actions are taken on the items detailed in the Financial Management Action Plan (provided in Annex B.4).

#### 4.4 Sustainability

4.4.1 The project is sustainable based on the following several key factors:

**(i) The long-term availability of renewable energy (hydro) generation capacity from the Rusumo power plant lowers the cost of power generation.** The study of the power plant is based on hydrological data spanning several years, which gives comfort for the availability of the power from the generation plant. Each power utility will enter into a long-term PPA with the SPV, under which it will be allocated a proportion of the power output. The payment obligations of each off-taker will be guaranteed by the respective governments. The PPA between the SPV and the three power off-takers establishes an agreed tariff over the contract period which is expected to contribute to lowering the current cost of power generation in Burundi, Tanzania and Rwanda.

**(ii) The off-takers have the financial capability to pay for the contracted amount of power under the PPA.** The conditions for power off-take under this project are financially attractive to the three countries, because it will help reduce electricity supply costs by displacing higher-cost sources, like thermal generation plants and emergency imports. Currently, the off-taker in Tanzania faces financial challenges having entered into high-cost emergency contracts with privately-owned emergency power producers. The Bank is therefore supporting the Government of Tanzania through budget support financing (about UA 132 million) which aims to implement the energy sector reform program in an effective manner.

**(iii) The hydropower plant owners (the three governments and SPV) have provided evidence of their long-term commitment to the objectives of the project.** The continued commitment, regional economics, stability and integration by developing/managing this joint asset project for the three Governments are key factors for the sustainability of the overall project. In this regard, the shareholders agreement between the three governments and the SPV, and the project implementation agreement arrangement ensure that the benefits of cooperation and integration are evident and shared equitably between the countries.

**(iv) The technical and financial capacity of the power off-takers to manage the transmission facilities.** REGIDESO, EWSA and TANESCO have many years of technical and managerial experience in operating and maintaining their national power transmission infrastructure, and hence will have minimal difficulty in operating and maintaining the new transmission lines under this project. Furthermore, in terms of financial capability; all of the EAs have sufficient financial capacity to cover the cost of operations and maintenance of the transmission facilities.

**(v) Project technical design.** All the technologies applied in the project have been widely used in other countries with similar conditions and in the region.

#### 4.5 Risk Management

4.5.1 The project involves some degree of risk at the implementation level and during operation of the facilities (after project completion). The major risks and mitigation measures are discussed in Table 4.1 below. Overall, the project risk is *low to moderate*.

Table 4.1 : Risk and mitigation measures

Risk	Risk description	Rating	Mitigation
<b>A) Risks at implementation level</b>			
<b>A.1) Hydro Power Plant Component</b>			
Political risk and failure of stakeholder coordination	<p><b>a) Intergovernmental cooperation:</b> A lack of support, unfavourable financing conditions and timely transfer of the fund from the Borrowers to the SPV may impede the harmonized implementation and timely completion of the hydropower power plant</p> <p><b>b) Involvement of Several stakeholders:</b> Coordination challenges among the Project's stakeholders due to its complicated implementation arrangement (the three governments, SPV, NELSAP, owner's engineer and EPC contractors)</p>	H	<p>a) (i) the GoB, GoR and GoT have showed a continuous commitment to the project by signing the shareholders agreement and the implementation arrangement.</p> <p>(ii) Prior to the loan approval and/or first disbursement, the financiers of the hydropower plant would ensure that its financing terms and agreements on the fund flow and control mechanism are well understood by the borrowers..</p> <p>b) (i) Strengthen the capability of NELSAP project implementation unit by employing several qualified staff (foreign and local), through WB finance, to ensure the smooth implementation and timely completion of the project.</p> <p>(ii) The Board of the SPV will establish a clear accountability and governance mechanism for monitoring and reporting the progress of project implementation.</p>
Delay on the construction of the hydropower plant component	Risk of construction start-up due to non-readiness of the run-of-river scheme designs; completion delays due to unforeseen geological and hydrological problems and/or that the cost of the project might escalate during implementation.	M	<ul style="list-style-type: none"> <li>▪ Select well-experienced and internationally reputable owner's engineer with clear and unambiguous Terms of Reference to prepare and finalize timely, the design for run-of-river scheme and the bidding documents.</li> <li>▪ Prior to entering into Engineering, Procurement and Construction (EPC) bidding process, conduct detailed geotechnical investigation to mitigate delays on completion and cost overruns.</li> </ul>
<b>A.2) Transmission Component</b>			
Completion delay and cost overrun	Risk of completion delay and/or that the cost of the project might escalate during implementation.	M	<ul style="list-style-type: none"> <li>▪ Detailed preparation of design and technical specifications, as well as, establishment of evaluation and qualification requirements, should ensure minimum variance in costs.</li> <li>▪ Selection of experienced and internationally reputable contractors through competitive bidding process with fixed price and time bound contracts will minimize delays in completion.</li> <li>▪ Selection and employment of experienced project management and supervision consultant to augment the capability of the project staff will ensure project's delivery efficiency.</li> </ul>
Delay on starting and completion of procurement process	The risk associated with delay on starting and long-time of procurement process due to limited human resources in REGIDESO, EWSA and TANESCO will delay the implementation period.	L	<ul style="list-style-type: none"> <li>▪ Utilisation of the advance contracting/procurement option to kick-start project implementation.</li> <li>▪ Selection of an experienced project management and supervision consultant to prepare the design, specifications and bidding documents.</li> </ul>

<b>Risk</b>	<b>Risk description</b>	<b>Rating</b>	<b>Mitigation</b>
Lack of implementation of Environmental and Social Mitigation Plans	The project is classified as Category - 1. There are risks to satisfactory implementation such as inadequate number of skilled staff in each of the PIUs of the executing agencies.	L	Each PIU's capacity will be enhanced with two additional safeguards staff, with Bank funding, to ensure that there is sufficient capacity to monitor and implement the ESMP and RAP. The project team will monitor safeguard compliance closely during the course of project implementation.
<b>B) Risks after completion of the project</b>			
<b>B.1) Hydropower Plant</b>			
Temporary capacity shortage	There is a risk associated with breakdown of machines for several days that may cause a shortage of power supply to the off-takers.	M	<ul style="list-style-type: none"> <li>▪ Avail sufficient spare parts, tools and consumables for scheduled and preventative maintenance works.</li> <li>▪ The SPV should ensure the selection of very well-experienced and reputable operations and Maintenance Company.</li> </ul>
<b>B.2) Transmission facilities</b>			
Failure of off-takers to meet obligations	There is a financial risk if the off-takers cannot meet their obligations as set out in the PPA due to a lack of adequate funds as a result of capital expenditures for project development and investment or operational inefficiency.	L	<ul style="list-style-type: none"> <li>▪ The PPA will clearly define the contractual obligations and associated penalties for defaulting in power off-take. Each off-taker is mandated to deposit in escrow, a sum of money equivalent as per the PPA.</li> <li>▪ Any capital expenditure for other project development and investment should consider the existing obligations of the off-takers.</li> </ul>
Capacity and technical risks	Risks related to the capacity of the off-takers in operating and maintaining their respective transmission facilities in terms of technical and financial performance.	L	<ul style="list-style-type: none"> <li>▪ Even though each off-taker has ample technical and managerial experience in operating and maintaining their national power transmission infrastructure, they should continue to strengthen the capability of their operation and maintenance staff through hands on training by working closely with the consultants to be employed to assist in project implementation.</li> </ul>

L: Low

M: Moderate

H: High

## 4.6 Knowledge Building

4.6.1 The knowledge transfer mechanism, especially regarding project management and supervision through the supervision consultant, is important in building the in-house capacity of the power utilities, as they will manage other similar projects to meet the government targets for increasing the power supply. During implementation of the project, knowledge building will be monitored and transferred through supervision reports, assessments of procurement processes, and preparation of audit reports.

4.6.2 Similar project implementation arrangements and technologies are likely to be used for other projects in the near future, such as for the Ruzizi III hydroelectric project which will involve Rwanda and Burundi.

## V. LEGAL FRAMEWORK

### 5.1 Legal Instrument

5.1.1 The legal instruments for the project are an ADF grant which will be extended to the Republic of Burundi, an ADF loan and an NTF loan which will be extended to the Republic

of Rwanda and an ADF loan which will be extended to the United Republic of Tanzania. The proceeds of the loans will be on-lent to EWSA and TANESCO respectively while those of the grant will be on-grant to REGIDESO, each on terms acceptable to the Bank.

## **5.2 Conditions Associated with Bank's and Fund's Intervention**

### **5.2.1 Conditions Precedent to Entry into Force of the ADF Loan and Grant and the NTF Loan**

- a) The entry into force of the ADF Loan Agreements for Rwanda and Tanzania shall be subject to the fulfilment by the respective borrowers of the provisions of Section 12.01 of the *General Conditions Applicable to the African Development Fund Loan Agreements and Guarantee Agreements (Sovereign Entities)*.
- b) The entry into force of the NTF Loan Agreement for Rwanda shall be subject to the fulfilment by the borrower of the provisions of Section 12.01 of the *General Conditions Applicable to the African Development Bank Loan Agreements and Guarantee Agreements*.
- c) The Protocol of Agreement for the ADF grant to Burundi shall enter into force on the date of its signature by the Fund and the grant recipient as indicated in Section 10.1 of the *General Conditions Applicable to Protocols of Agreement for Grants of the African Development Fund*.

**5.2.2 Conditions precedent to first disbursement of each of the ADF Loans, the ADF Grant and the NTF Loan:** The first disbursement of each loan or grant shall be subject to the relevant borrower or grant recipient having:

- (i) submitted to the Bank evidence of execution of a subsidiary financing agreement with the relevant executing agency, i.e. an On-Lending Agreement for the ADF and NTF Loans, and a Sub-Grant Agreement for the ADF Grant, each with terms and conditions acceptable to the Fund;
- (ii) submitted to the Bank a Resettlement Action Plan (RAP) for its transmission component of the project, in form and substance satisfactory to the Fund, together with a Works and Compensation Schedule detailing: (a) the sections into which the transmission lines and substations construction works will be divided and, (b) the timeframe for compensation and/or resettlement of all Project Affected Peoples (PAPs) in respect of all such sections (as specified in the RAP and any updates thereto);
- (iii) provided evidence to the Bank of the opening of a designated special account for foreign currency and a designated special account for local currency at its central bank, or at a bank acceptable to the Fund, for the receipt of the financing proceeds (Paragraph 4.1.4 here above);
- (iv) provided evidence satisfactory to the Fund that Burundi has received duly authorization for the construction of the transmission line through Tanzanian territory.

### **5.2.3 Other Conditions**

- i) Each of the borrowers/ grant recipient shall, every 30 June (Tanzania and Rwanda) and 31 March (Burundi) at the latest, during the project implementation, provide to the Fund

satisfactory evidence confirming that adequate provision has been made in its national budget for that year for the implementation of the RAP (Paragraph 3.2.5.1 here above);

- ii) Submission to the Bank of proof of effective payment of PAPs in each section of the transmission lines and substations construction works according to the RAP, prior to the commencement of construction works of that section (Paragraph 3.2.5.1 here above).

#### **5.2.4 Undertakings**

- i) The borrowers/grant recipient agree to implement provisions and conditions of any environmental licenses issued by their respective environmental regulators;
- ii) The borrowers / grant recipient shall, within three months from the date of first disbursement, provide evidence satisfactory to the Bank of the establishment of the project implementation team within their existing Project Implementation Units (PIUs); through the recruitment of qualified and experienced professionals comprising of a transmission line engineer, a substations engineer, a civil engineer, a procurement specialist, an accountant, an environmentalist, and a social expert, for each PIU, whose qualifications and experience shall be acceptable to the Fund (Paragraph 4.1.1.1 here above);
- iii) The borrowers / grant recipient undertake to implement and report to the Bank on the implementation of the Environment and Social Management Plan (ESMP) for the Project annually and on the implementation of the RAPs quarterly (Para 3.2.6 here above); and
- iv) The borrowers and the grant recipient shall submit to the Bank quarterly progress and financial reports as well as annual audit reports, in a form and substance acceptable to the Fund, on the implementation of the project.

#### **5.3 Compliance with Bank Policies**

This project complies with all applicable Bank policies. In particular, it is consistent with the Bank's Energy Sector Policy, approved in October 2012.

### **VI. RECOMMENDATIONS**

Management recommends that the Boards of Directors approve the following for the purposes and subject to the conditions stipulated in this report:

- (i) The waiver of the rule of origin with respect to procurement using NTF resources to align with the universal procurement of the ADF;
- (ii) NTF loan of UA 6.5 million to the Republic of Rwanda;
- (iii) ADF loan of UA 18.884 million to the Republic of Rwanda from the resources of ADF-12, cancelled resources and ADF-12 additional resource re-allocation;
- (iv) ADF loan of UA 22.408 million to the United Republic of Tanzania from the resources of ADF-12; and
- (v) ADF grant of UA 16.7 million to the Republic of Burundi from the resources of ADF-12;

## Appendix I: Country's Comparative Socioeconomic Indicators

### Burundi: Selected Economic and Financial Indicators, 2010–16

	2010	2011	2012	2012	2013	2014	2015	2016
		Prel.	Prog. <sup>1</sup>	Proj.		Proj.		
(Annual percentage change)								
<b>National income and prices</b>								
Real GDP growth	3.8	4.2	4.2	4	4.5	5.1	5.5	5.5
GDP deflator	12.3	14.3	15.2	15.4	11.1	7.8	6	5.5
Consumer prices (period average)	6.4	9.7	19.6	17.9	9.5	5.9	5.2	5.3
Consumer prices (end of period)	4.1	14.9	14.7	11.8	9	5.9	5.7	5.5
<b>External sector</b>								
Exports, f.o.b. (US\$)	48	22.5	3.1	4.7	-17.9	9.2	7.6	0.1
Imports, f.o.b. (US\$)	119	7.9	-2.9	7.3	-8.2	4.7	4.8	7.5
Terms of trade (deterioration = -)	51.7	-9	-17.9	-17.9	-10.4	3.8	1.3	-6.2
(Change in percent of beginning of period M2, unless otherwise indicated)								
<b>Money and credit</b>								
Net foreign assets	-5.4	-12.1	-0.6	-6.5	8.6			
Domestic credit	25.1	30.7	28.6	12.3	10			
Government	7.4	8	5.4	4.9	2.8			
Private sector	17	24.1	23.3	6.9	8.2			
Money and quasi-money (M2)	19.4	6.1	18.4	7.3	16			
Reserve money (12-month growth rate)	5.7	0.6	28.1	26.5	17.9			
(Percent of GDP)								
<b>General government</b>								
Revenue and grants	37.3	36.1	30.8	33	29.5	26.9	26.5	26.5
Tax and non-tax revenue	14.6	15.4	15.1	14.8	14.9	15	15.3	15.5
Total expenditure	41	40	33.6	34.6	31.2	30.2	29.4	29.4
Net lending (+)/ borrowing (-)	-3.6	-4	-2.7	-1.7	-1.7	-3.3	-2.9	-2.9
<b>External sector</b>								
Current account balance	-12.3	-14.8	-11.6	-16.3	-16	-15.7	-15.2	-14.8
Overall balance of payments	0.7	-1.6	-0.3	-1.1	1.4	-0.2	-0.2	-0.1
<b>Savings-investment balance</b>								
Private	-8.6	-10.8	-8.8	-14.7	-14.3	-12.4	-12.2	-11.9
Public	-3.6	-4	-2.7	-1.7	-1.7	-3.3	-2.9	-2.9
<b>External sector</b>								
Gross official reserves (US\$ mill)	332	296	288	269	307	343	375	416
Months of imports	4.1	3.4	3.8	3.3	3.6	3.9	4.1	4.4
<i>Memorandum item</i>								
Nominal exchange rate (BIF/USD)	1231	1261	...	...	...	...	...	...
GDP at current market prices (BIF billion)	2495	2971	3566	3566	4138	4690	5242	5833
Nominal GDP per capita (US \$)	242	255	289	270	293	319	344	369

Sources: Burundi authorities; IMF staff estimates and projections.

<sup>1</sup> IMF Country Report 12/226.

## Rwanda - Country's Comparative Socioeconomic Indicators<sup>5</sup>

### Rwanda - Selected Economic and Financial Indicators, 2008–17

	2008	2009	2010	2011	2012	2012	2013	2013	2014	2015	2016	2017
				<i>Est.</i>	<i>Country Report No. 12/152</i>	<i>Proj.</i>		<i>Country Report No. 12/152</i>				
<b>Output and prices</b>												
Real GDP growth	13.4	6.2	7.2	8.3	7.7	7.7	7.5	7.6	7.2	7.0	7.0	7.0
Real GDP (per capita)	11.1	4.0	5.0	6.0	5.5	5.5	5.3	5.4	5.0	4.8	4.8	4.8
GDP deflator	10.4	9.5	2.5	7.7	7.7	7.7	7.8	7.2	6.4	5.3	5.3	5.5
Consumer prices (period average)	15.4	10.3	2.3	5.7	7.9	7.9	7.0	7.0	6.3	5.8	5.3	5.0
Consumer prices (end of period)	22.3	5.7	0.2	8.3	7.5	7.5	6.5	6.5	6.0	5.5	5.0	5.0
<b>Money and credit<sup>1</sup></b>												
Domestic credit <sup>2</sup>	20.5	3.8	9.4	5.0	18.5	12.8	19.6	29.0	16.0	11.4	15.0	12.5
Government <sup>2</sup>	-18.1	0.2	2.4	-13.2	6.7	-5.8	3.3	16.1	-4.4	4.6	0.0	0.0
Economy <sup>2</sup>	38.6	3.6	7.0	18.2	11.8	18.6	16.3	12.9	20.5	6.8	15.0	12.5
Broad money (M2)	24.2	13.1	16.9	26.8	17.0	16.5	16.9	16.3	15.6	13.7	13.7	13.8
Reserve money	23.5	0.3	12.5	23.4	17.0	16.5	16.9	16.3	15.6	13.7	13.7	13.8
Velocity (GDP/M2; end of period)	5.5	5.6	5.3	4.9	4.8	4.9	4.8	4.8	4.8	4.7	4.7	4.6
<b>National income accounts</b>												
National savings	9.1	5.1	4.1	3.1	2.2	2.8	4.1	3.3	5.3	6.9	8.1	8.8
Gross investment	23.5	22.3	21.7	22.1	23.8	23.7	23.0	23.0	21.5	20.0	19.7	19.4
<i>Of which: private (including public enterprises)</i>	13.1	12.4	10.8	9.2	9.5	9.5	9.8	9.8	10.1	10.4	10.7	11.0
<b>Government finance<sup>3</sup></b>												
Total revenue (excl. grants)	12.6	14.9	12.5	13.6	13.8	14.3	14.0	14.9	14.9	15.1	14.9	15.2
Total expenditure and net lending	22.6	26.3	25.7	27.7	26.9	26.6	28.0	32.3	28.4	24.4	23.3	22.9
Capital expenditure	8.2	11.0	10.1	12.3	12.4	11.7	13.5	13.7	13.1	10.1	9.4	9.0
Current expenditure	15.1	14.5	14.7	14.8	14.5	14.9	14.3	14.0	14.6	14.1	13.9	13.4

<sup>5</sup> IMF (2013). "IMF Executive Board Concludes 2012 Article IV Consultation with Rwanda." Public Information Notice No. 13/30, 19 March 2013

## Tanzania - Country's Comparative Socioeconomic Indicators<sup>6</sup>

### Tanzania: Selected Economic and Financial Indicators, 2009/10–2015/16

	2009/10	2010/11	2011/12	2012/13	2012/13	2013/14	2014/15	2015/16
				Prog.1	Proj.		Proj.	
(Annual percentage change, unless otherwise indicated)								
<b>National income and prices</b>								
Real GDP growth (calendar year)	7	6.4	6.9	6.5	7	7.2	7	6.9
Real GDP growth	6.5	6.7	6.7	6.7	7	7.1	7.1	7
Consumer prices (period average)	10.5	7	17.8	11.4	11.6	7.2	5.3	5
Consumer prices (end of period)	7.2	10.9	17.4	9.5	9.5	6	5	5
<b>External sector</b>								
Exports, f.o.b. (US\$ millions)	3,805	4,896	5,562	6,261	5,888	6,539	7,244	7,829
Imports, f.o.b. (US\$ millions)	-6,596	-8,012	-10,617	-11,745	-11,000	-12,256	-12,761	-13,367
Export volume	6.7	10.8	8.8	7.4	2	12.6	11.1	8.2
Import volume	5.2	7	28.7	9.3	3.2	10.2	4.7	5.6
Terms of trade	8.5	1.9	1.5	3.5	3.4	-2.5	0.2	0.7
Nominal effective exchange rate	-3.7	-17.7	7.6	...	0.6	...	...	...
Real effective exchange rate	0.2	-13.7	21.4	...	6	...	...	...
<b>Money and credit</b>								
Broad money (M3)	25.1	22	11.8	17.3	14.5	13	...	...
Net foreign assets	25.3	10.2	4	10.9	11.7	9.7	...	...
Net domestic assets	24.9	35.8	19.2	22.6	16.8	15.6	...	...
Credit to nongovernment sector	17.6	24.3	18.5	18.7	17.4	13.9	...	...
Velocity of money (GDP/M3; average)	3.4	3.2	3.2	3.3	3.3	3.4	...	...
Treasury bill interest rate (in percent; end of period)	3.3	4.8	13.8	...	...	...	...	...
(Percent of GDP)								
<b>Public Finance</b>								
Revenue (excluding grants)	15.9	16.4	17.6	18.8	18.1	19.9	20	20.2
Total grants	4.6	4.7	4.5	3.8	3.7	4.2	3	3
Expenditure	27.5	27	26.2	28.1	27.6	29.1	27.1	26.6
Unidentified fiscal measures	0	0	0	0	0	0	-0.8	-0.9
Overall balance (excluding grants)	-11.1	-11.3	-8.6	-9.3	-9.5	-9.2	-7	-6.4
Overall balance (including grants)	-6.4	-6.6	-5	-5.5	-5.8	-5	-4	-3.5
Domestic financing	1.9	3.6	0.8	-1.7	0.2	-1.1	0.3	1
Domestic debt stock (end of period)	9.1	10.6	11.1	9.4	10.4	10.1	9.4	9.5
Total public debt	33.8	40.4	39.8	42.4	41.6	43.3	44	44.2
<b>Savings and investment</b>								
Resource gap (net exports of goods and services)	-11.3	-15.3	-18.1	-16.9	-16.7	-15.6	-14	-12.4
Investment	30.6	34.5	38.1	39.1	39.2	38.3	37.5	37.6
Government	8.4	8.5	8.9	9.2	9.1	8.9	8.6	8.2
Nongovernment <sup>8</sup>	22.2	26	29.3	29.9	30.2	29.4	28.9	29.4
Gross domestic savings	19.3	19.3	20	22.2	22.6	22.7	23.5	25.2
<b>External sector</b>								
Current account balance (excluding current transfers)	-11.7	-12.5	-18.9	-17.9	-16	-17	-14.3	-12.9
Current account balance (including current transfers)	-9	-9.4	-16.5	-16.2	-14.3	-15.2	-13	-11.7
(Millions of U.S. dollars, unless otherwise indicated)								
<b>Balance of payments</b>								
Current account balance (excluding current transfers; deficit= -)	-	-2,951	-4,885	-5,412	-4,837	-5,674	-5,166	-5,019
Gross official reserves (end of period)	3,483	3,610	3,797	4,061	4,233	4,501	4,810	5,127
In months of imports of goods and services (current year)	5.2	3.9	3.6	3.4	3.7	3.6	3.7	3.8
Total external debt stock (end of period; percent of GDP) <sup>7</sup>	28.5	33.1	34.4	39	35	36.8	37.9	37.9

Sources: Tanzanian authorities and IMF staff estimates and projections.



**Appendix II: AfDB's On-going Portfolio  
Burundi**

No.	Sector and project name	Type of instrument	Total amount (UA million)	% disb. as of May 2013	Approval date
<b>1.0</b>	<b><u>AGRICULTURE</u></b>				
	Programme d'Amenagement Lac Tanganyika (Regional)	ADF Loan	4.96	55.8	17Nov04
	Projet d'Amenagement des Bassins Versants et d'Amelioration de la Resilience Climatique(PABVARC)	FSF Grant	6.23	0.0	22Apr13
		GEF Grant	2.06	0.0	22Apr13
	Projet Developpement Rural du Bugesera (Regional)	ADF Grant	15.02	16.8	25Sep09
<b>TOTAL APPROVALS</b>			<b>28.27</b>		
<b>2.0</b>	<b><u>TRANSPORT</u></b>				
	Projet Gitega- Nyangungu-Ngozi Phase 1	FSF Grant	24.10	57.7	27Sep10
	Projet Gitega-Ngozi Phase 2	FSF Grant	32.00	0.0	29Jun11
		ADF Grant	10.00	0.0	29Jun11
	Projet d'Amenagement de Routes (Mugina-Mabanda-Nyanza Lac et Rubavu-Gisiza) et de Facilitation de Transport sur le Corridor Nord-Sud - Phase III (Regional)	ADF Grant	27.50	0.0	27Jun12
	Route Nyamitanga-Ruhwa-Ntendezi-Mwityazo (Regional)	ADF Grant	49.38	75.3	16Dec08
	Phase 2 Chemin Fer Isaka-Kiga/Keza-Musongati (Regional)	ADF Grant	1.67	36.6	17Nov09
<b>TOTAL APPROVALS</b>			<b>144.65</b>		
<b>3.</b>	<b><u>WATER SUPPLY &amp; SANITATION</u></b>				
	Projet de Rehabilitation et d'Extension des Infrastructures Hydrauliques en Milieu Rural	ADF Grant	12.00	88.1	14Dec05
	Lake Victoria Water and Sanitation Programme (Regional)	ADF Grant	14.13	1.4	17Dec10
<b>TOTAL APPROVALS</b>			<b>26.13</b>		
<b>4.</b>	<b><u>SOCIAL</u></b>				
	Projet de Creation d'Emplois	ADF Grant	10.00	80.6	24Jun09
<b>TOTAL APPROVALS</b>			<b>10.00</b>		
<b>5.</b>	<b><u>MULTI – SECTOR</u></b>				
	Programme d'Appui aux Reformes economiques V (PARE V)	FSF Grant	12.00	58.3	11Jul12
	Renforcement des Capacités Institutionnelles Emploi et Entreprenariat	FSF Grant	1.35	0.0	12Nov12
	Renforcement des Capacités en Stat S&E Pauvreté	FSF Grant	1.92	0.0	12Nov12
	Renforcement des Capacités de Collectes des Données MO&PS	FSF Grant	0.40	0.0	9Nov12
	Projet de Renforcement des Capacités dans le domaine de la Gestion des Finances Publiques (PRCGF)	FSF Grant	1.24	0.0	9Nov12
	Projet d'Appui au Développement du Secteur Prive (PADSP)	FSF Grant	0.88	0.0	9Nov12
<b>TOTAL APPROVALS</b>			<b>17.80</b>		
<b>6.</b>	<b><u>POWER</u></b>				
	NELSAP Interconnection Project (Regional)	ADF Grant	15.15	5.3	27Nov08
<b>TOTAL APPROVALS</b>			<b>15.15</b>		
<b>GRAND TOTAL APPROVALS</b>			<b>242.00</b>	<b>34.56%</b>	

## Rwanda - AfDB's On-going Portfolio

No.	Sector and project name	Type of instrument	Total amount (UA million)	% disb. as of May 2013	Approval date
<b>1.0</b>	<b><u>AGRICULTURE</u></b>				
1.1	Bugesera Agriculture Development Support Project—PADAB	ADF grant	10.00	73.42%	24-Jul-06
1.2	Livestock Infrastructure Support Program—LISP (SBS)	ADF loan	21.81	100%	29-Jun-11
<b>TOTAL APPROVALS</b>			<b>31.81</b>	<b>91.64%</b>	
<b>2.0</b>	<b><u>TRANSPORT</u></b>				
2.1	Butare-Kitabi-Ntendezi Road Project	ADF grant	16.00	61.68%	25-Mar-09
<b>TOTAL APPROVALS</b>			<b>16.00</b>	<b>61.78%</b>	
<b>3.0</b>	<b><u>WATER SUPPLY &amp; SANITATION</u></b>				
3.1	Rural Water and Sanitation—Phase II (AEPA)	ADF grant RWSSI	16.00	67.68%	1-Jul-09
<b>TOTAL APPROVALS</b>			<b>16.00</b>	<b>67.68%</b>	
<b>4.0</b>	<b><u>SOCIAL</u></b>				
4.1	Support to Skills Development in Science & Technology	ADF grant	6.00	27.17%	11-Nov-08
4.2	Regional ICT Centre of Excellence	ADF loan	8.60	0.63%	14-Dec-10
<b>TOTAL APPROVALS</b>			<b>14.60</b>	<b>11.54%</b>	
<b>5.0</b>	<b><u>MULTI – SECTOR</u></b>				
5.1	Competitiveness & Enterprise Development	ADF grant	5.00	51.8%	29-Dec-08
5.2	Support for Policy and Strategy Development	ADF grant	1.00	96.4%	18-Sep-09
5.3	Skills employment and entrepreneur Prg.	ADF grant	17.19	100%	3- Apr.-13
5.4	Skills employment and entrepreneur Prg.	ADF Loan	8.42	0.00%	3- Apr.-13
<b>TOTAL APPROVALS</b>			<b>6.00</b>	<b>56.63%</b>	
<b>6.0</b>	<b><u>PRIVATE SECTOR</u></b>				
6.1	Support to Rwanda Private Sector Federation	FAPA grant	1.00	99.99%	27-Aug-08
6.2	KivuWatt	AfDB loan	15.89	81.45%	3-Feb-11
6.3	BRD	AfDB loan	8.00	50.00%	19-Nov-10
6.4	BRD (LOC & FAPA)	AfDB loan FAPA grant	5.88	0.00%	19-Nov-10
6.5	BK (LOC & FAPA)	AfDB loan ADF loan	7.96	50.00%	19-Nov-10
<b>TOTAL APPROVALS</b>			<b>30.73</b>	<b>77.92%</b>	
<b>7.0</b>	<b><u>MULTINATIONAL OPERATIONS</u></b>				
7.1	Isaka-Kigali Railway Study (Phase 2)	ADF grant	1.67	36.91%	17-Nov-09
7.2	Nyamitanga-Ruhwa-Ntendezi-Mwityazo Road	ADF grant	50.62	46.32%	16-Dec-08
7.3	NELSAP Interconnection	ADF grant	30.47	0.77%	27-Nov-08
7.4	Bugesera Multinational Project	ADF grant	14.98	19.62%	25-Sep-09
7.5	Rubavu-Gisiza Road Project	ADF loan/grant	45.05	0%	25-Jul-12
7.6	Sustainable management of woodlands and restoration of natural forests of Rwanda	Congo Basin Fund (grant)	4.016	13.56%	29-Nov-11
7.7	Lake Victoria Water & Sanitation Program	ADF grant	15.11	0.32%	17-Feb-10
7.8	Payment and Settlement Systems Integration Project	ADF grant	3.69	0%	5-Dec-12
<b>TOTAL APPROVALS</b>			<b>165.61</b>	<b>16.80%</b>	
<b>GRAND TOTAL APPROVALS</b>			<b>280.75</b>	<b>44.20%</b>	

## Tanzania - AfDB's On-going Portfolio

No.	Sector and project name	Type of instrument	Amount (UA m)	% disb. as of May 2013	Approval date
<b>A.1</b>	<b>AGRICULTURE</b>				
1	District Agricultural Sector Investment Project	ADF	36.00	64.56	24-Nov-2004
2	Marketing Infrastructure, Value Addition and Rural Finance Program (MIVARFP)	ADF	40.00	4.03	29-Jun-2011
<b>A.2</b>	<b>TRANSPORT</b>				
3	Singida-Minjingu-Babati Road Upgrading	ADF	60.00	83.01	17 Sep 2007
4	Tanzania Road Sector Support Programme I	ADF	152.00	26.77	2-Dec-2009
5	Tanzania Road Sector Support Programme II	ADF	140.00	0.00	5-Apr-2012
<b>A.3</b>	<b>WATER SUPPLY/SANITATION</b>				
6	Rural Water Supply and Sanitation Programme II	ADF	59.00	50.11	15-Sep-2010
		RWSSF	5.80	49.59	13 Sept 2006
7	Zanzibar Water & Sanitation Project	ADF	25.00	26.11	11-Nov-2008
		RWSSF	2.76	39.72	11-Nov-2008
8	Zanzibar Urban Water & Sanitation Project	ADF	14.00	0.00	19-Dec-2012
<b>A.4</b>	<b>ENERGY</b>				
9	Electricity V Project	ADF	28.68	1.60	14 Dec. 2007
		ADF-G	1.32	57.56	14 Dec. 2007
10	Iringa-Shinyanga Transmission Line	ADF	45.36	0.00	26-Oct-2010
<b>A.5</b>	<b>SOCIAL</b>				
11	Support to Maternal Mortality Reduction Project	ADF	40.00	57.29	11 Oct 2006
12	Small Entrepreneurs Loan Facility (SELF) II	ADF	20.00	54.93	10-May-2010
13	Alternative Learning and Skills Development (ALSD) II	ADF	15.00	2.78	29-Jun-2011
<b>A.6</b>	<b>MULTI-SECTOR</b>				
14	CRDB SME Partial Credit Guarantee Facility	Loan	8.00	0.00	22-Jul-2008
15	Institutional Support for Good Governance (ISPGG) II	ADF	5.20	50.70	20-Sep-2010
16	Poverty Reduction Support Loan IV	ADF	100.00	60.03	16-Dec-2011
17	EFC Tanzania (FAPA Grant)		0.94	0.00	1-Jun-2012
<b>B)</b>	<b>MULTINATIONAL OPERATIONS</b>				
18	Support the Lake Tanganyika Integrated Regional Development Programme (PRODAP)	ADF	4.99	59.44	17-Nov-2004
19	Dsm-Isaka-Kigali/Keza-Musongati Railway Phase2	ADF	1.66	37.30	17-Nov-2009
20	Arusha - Namanga - Athi River Rd Upgr. (TZ/Ken)	ADF	0.54	37.87	13-Dec-2006
21	Arusha - Namanga - Athi River Rd Upgr. (TZ/Ken)	ADF -G	3.50	66.31	18 Dec. 2006
22	East Africa Transport and Trade Facilitation (EAC)	ADF-G	6.20	52.52	29 Nov. 2006
23	Arusha-Holili/Taveta-Voi Road Project	ADF	79.90	0.00	16-Apr-2013
24	Lake Victoria Water Supply & Sanitation Programme Phase II (LVWSSP)	ADF	17.48	0.84	17-Dec-2010
25	The EAC Payments & Settlement Systems Integration Project (EAC - PSSIP)	ADF-G	15.00	0.00	5-Dec-2012
<b>C)</b>	<b>OTHER MULTINATIONAL OPERATIONS</b>				
26	East Africa Trade & Transport (NCTTCA)	ADF-G	2.00	76.13	29 Nov. 2006
27	SADC: Shared Watercourses Support Project for Buzi, Save & Ruvuma River Basins	ADF-G	9.38	49.28	25-Jan-2006
28	SADC: Strengthening of Institutions for Risk Mngt of Transboundary Animal Diseases (TADs) - Angola/Malawi/Moz/TZ/Zambia	ADF-G	13.71	84.37	5-Jul-2006
29	SADC: Support to the control of communicable diseases (HIV/AIDS, Malaria & TB)	ADF-G	20.00	53.91	31-May-2006
30	Dsm-Isaka-Kigali/Keza-Musongati Railway Phase2	ADF-G	1.67	34.74	17-Nov-2009
		ADF-G	1.67	35.03	17-Nov-2009
31	Programme to Build Statistical Capacity for MDGs Monitoring and Results Measurement (40 countries)	ADF-G	20.00	93.95	18-Jan-2012
32	Songwe River Basin Development Programme (Malawi and Tanzania)	AWF-TF	0.56	33.40	25-May-2010
		AWF-TF	2.99	30.10	25-May-2010
		NEPAD IPPF	1.65	10.12	28-Apr-2010
<b>GRAND TOTAL</b>			<b>1,001.96</b>	<b>31.22%</b>	

## Appendix III: Similar Projects Financed by the Bank and Other Development Partners

### Burundi

Country/Agency	Sector	Project name	Development Partners finance (millions)	Completion Date
World Bank	Energy and Water	PMIEE: Projet Multisectoriel d'Infrastructure d'Eau et d'Electricité	\$US50	2013
	Energy	PURSE : Projet d'urgence pour le Secteur de l'Electricité	\$US15	2014
	Energy	Jiji-Mulembwe HPP	Promise	
AfDB	Energy	PREIEL: Projet de Réhabilitation et d'extension d'Infrastructures d'Eau et d'Electricité	UA 7.32	2011
	Energy	PMIREL-PLEN : Projet Multinational d'Interconnexion des Réseaux Electriques des Pays des Lacs Equatoriaux du Nil – Ligne à 220kV Kamanyola-Bujumbura <sup>7</sup>	UA 15.15	2014
KfW	Energy	PMIREL-PLEN : Projet Multinational d'Interconnexion des Réseaux Electriques des Pays des Lacs Equatoriaux du Nil – Ligne à 220kV Kamanyola-Bujumbura	€5	2014
	Energy	Interconnexion Rwanda-Burundi- Ligne <a 220kV Kigoma-Gitega	€	2016
European Union	Energy	Interconnexion Rwanda-Burundi- Ligne <a 220kV Kigoma-Gitega	€6	2016
EIB	Energy	Jiji-Mulembwe HPP	Promise	
REGIDESO	Energy	Study for the rehabilitation and expansion of the network of Bujumbura city	Bif 500 000	2013

<sup>7</sup> The indicated date of completion is the one fixed in the grant agreement. Considering the fact that the project is now depending of Ruzizi III HPP project and of the Kamanyola-Kibuye TL, the completion date will be surely postponed.

## **Rwanda - Similar Projects Financed by the Bank and Other Development Partners**

<b>Country/Agency</b>	<b>Sector</b>	<b>Project</b>	<b>Development Partners finance (millions)</b>	<b>Completion Date</b>
World Bank	Transmission	Urgent Energy Development Project (UERP) PO90 194	USD 25	2010
BADEA + Saudi Fund	Electricity access	Increase electricity access in three areas in Rwanda	USD 24.388	2012
Rwanda Government	Transmission and Electricity access	Electrification of six districts in Eastern Province	USD 68.6	2013
European Union	Electricity access	Increase Rural Energy Access in Rwanda through Public Electrification Project for the Rural Population through Renewable Energy (EPRER)	Euro 18	2013
OFID	Electricity access	Electricity Access Scale-Up Project Loan Agreement N° 1293P”	USD 10	2013
World Bank IDA	Electricity access	Electricity Access Scale-Up and Sector-Wide Approach (EASSDP), CR N° 4651-RW	USD 70	2016
JICA	Transmission and Electricity access	Project for improvement of sub stations and Kigali distribution lines	USD 25	2014
Government of the Netherlands	Generation and electricity access	Rwanda Electricity Sector Programme—Investment Prospectus	USD 39	2014
AFD	Electricity access	Convention AFD No. CRW 3000 01	Euro 4.6	2014
OFID	Transmission	Additional funds for EASSDP	USD 12	2015
World Bank IDA	Electricity access	Additional funds for EASSDP	USD 60	2016
Belgian Technical Cooperation	Generation and electricity access	Private Partnerships—IREARPPP	Euro 17.5	2016
CTB	Generation	Rukarara II HPP	Euro 5.741	2013
EX-IM Bank	Generation	Nyabarongo hydropower project	USD 80	2014
Belgian Technical Cooperation	Generation	Geothermal resource development	Euro 27	2017
BADEA / OFID	Generation	Rehabilitation of three hydroelectric power plants (Mukungwa-Gihira-Gisenyi)	Euro 3	2014
AfDB	Transmission	NELSAP Rwanda-Uganda Interconnection	UA 30.47	2014
KfW	Transmission	NELSAP Rwanda-Burundi Interconnection and NELSAP Rwanda-DRC Interconnection	Euro 36.25	2015

## **Tanzania - Similar Projects Financed by the Bank and Other Development Partners**

<b>Country/Agency</b>	<b>Project</b>	<b>Instrument</b>	<b>Finance (US\$ millions)</b>	<b>Completion Date</b>
AfDB	Iringa- Shinyanga Transmission Line (Backbone transmission investment project)	Credit	52.62	2014
AfDB	Electricity V	Loan/Grant	34.8	2015
EU	Up-Scaling Access to integrated modern energy services for poverty reduction	Grant	2.98	2013
EU	Yovi Hydro Power Project	Grant	3.19	2014
EU	Upgrade of Mawengi micro hydro plant	Grant	1.88	2014
EU	Cluster Solar PV Project	Grant	1.24	2014
EU	Upgrade of Ikondo micro hydro plant	Grant	1.85	2015
EU	Introducing a new concept for affordable biogas system	Grant	1.56	2015
Finland	Improving the electric power supply reliability in the city of Dar es Salaam	Credit	32.58	2014
JICA	Backbone Transmission Investment Project	Credit	60	2014
JICA	Project for Reinforcement of Distribution Facilities in Kilimanjaro Region	Grant	30	2013
JICA	Project for Reinforcement of Power Distribution in Zanzibar Island	Grant	30	2013
JICA	Project for Capacity Development of Efficient Distribution and Transmission Systems	Grant	4.28	2014
MCC	Malagarasi Hydropower and Kigoma Distribution	Grant	11.5	2013
SIDA	Rural Energy Fund Support	Credit	31.67	2014
SIDA	Capacity Development to REA	Credit	4.37	2014
SIDA	WB TF Electricity Access	Credit	4.68	2013
SIDA	Ruhuji & Kakono Hydro	Credit	1.72	
SIDA	Makambako-Songea 132 kV Transmission Line	Loan/Grant	78	2014
WB	Tanzania Energy Development and Access Project (TEDAP).	Credit	69.62	2015
WB	Backbone Transmission Investment Project	Credit	67.63	2014
WB	Energy Sector Capacity Assistance Project	Credit	27	2017
WB	Singida Wind IPP		100	2014
WB	Ruhudji HPP	Loan/Grant	300	2018
Korea EDCF	Backbone Transmission Investment Project	Credit	36	2014
SIDA	Hale HPP Rehabilitation	Loan/Grant	25.27	2015
Netherlands	Electrifying Rural Tanzania	Loan/Grant	7.46	2022
Norway	Support to the Energy Sector	Grant	4.03	



Appendix IV: Map of Project Area

