Regional Rusumo Falls Hydroelectric Project
PROJECT FACTS

Project Objective

To increase Supply of Electricity to the National Grids of Burundi, Rwanda and Tanzania

- **Capacity to be installed:** 80 MW
- **Beneficiaries:** 27MW for each member country's national grid
- **Location:** Kagera River: Northwest Tanzania in Ngara district and Southeast Rwanda in Kirehe district

**Project Cost and Financiers:**

- **The World Bank:** for Rusumo 80MW Power Plant
- **African Development Bank:** for the Transmission Lines

**Ownership:** Rusumo Power Company Limited (RPCL) owned by 3 Shareholder Countries: Burundi, Rwanda and Tanzania

**Implementing Agency:** Nile Equatorial Lakes Subsidiary Action Program (NELSAP) Project Implementer Unit on behalf of RPCL

**Owner’s Engineer:** Joint venture of AECOM-ARTELIA from Canada and France

**Contractor CP1:** Joint Venture of CGCOC Group and Jiangxi Water & Hydropower Construction Company (JWHC) China

**Contractor CP2:** Joint Venture of Andritz Hydro Germany and Andritz Hydro India

**Power Plant Component**

- **Dam Type:** concrete / Height: 13m / Length including spillway: 116m
- **Headrace tunnel:** Length: 700m / Width x height: 9m x 12-13m
- **Power house:** Installed capacity: 80MW (500 GWh/year)
- **Tailrace canal:** 250m long and 45m wide
- **Switchyard:** 220 kV

**Key Project Milestones**

- **ESIA & RAP studies completed:** February 2013
- **Project Financing Agreements signed:** 11\textsuperscript{th} October 2013
- **Rusumo Power Company Limited (RPCL) established:** November 2013
- **Preparations, negotiations and signing of various Project Agreements**
- **Project financing effectiveness:** 11\textsuperscript{th} July 2014
- **Owners Engineer recruited:** June 2014
- **Compensation and land acquisition:** Completed
- **Construction contracts signed:** 9\textsuperscript{th} November 2016
- **Construction commencement:** February 2017
- **Commissioning of the Unit 1 Wet Test by end of November 2022** (target date)
1. BACKGROUND AND HISTORIC PERSPECTIVE

The Rusumo Falls is located on the Kagera River on the border between Rwanda (Southeast) and Tanzania (Northwest) and about 25 kilometers downstream of Burundi, Rwanda and Tanzania common border point. The catchment at the falls drains to the territories of Tanzania and Rwanda.

Kagera River Basin is shared by Burundi, Rwanda, Tanzania and Uganda and is the most remote headstream of the River Nile, as well as the largest tributary to Lake Victoria, the world’s second largest freshwater lake by surface area. The Kagera river basin covers an area of about 60,000 square kilometers, a sub-basin of the River Nile system.

The Rusumo Falls was identified as a potential area for hydropower generation as early as 1970s, to address inadequate energy, which is one of the major socio-economic development challenges facing Burundi, Rwanda and Tanzania. Shortage of electricity in these countries and indeed the entire Nile Basin region has resulted into an underdeveloped manufacturing sector hence limited options for business development necessary to increase income and reduce poverty; and limited opportunities for modernizing and improving the quality of key infrastructure (water supply, health care, social utilities, etc.).

Rwanda has a current electricity access of 46% and targets to increase to 100% by 2024 through connecting additional 2.4 million households. Tanzania has a current electricity access of 67% with household connectivity at 32%. While Burundi current electricity access rate is at 10%. Most households in the region still rely on wood for their cooking and heating needs, leading to extensive deforestation and soil erosion.

Although the three partner shareholders discussed over several years to move Rusumo Falls project forward, implementation of the highly needed project was not forthcoming due to a number of reasons. These included among other; lack of commitment from the partner states, lack of investment finance, civil conflict as well as absence of a joint institution to coordinate the project.

The Regional Rusumo Falls Hydroelectric Project (RRFHP) was conceived in 1977 under the auspices of the regional transboundary organization, the Kagera Basin Organization (KBO) under the old East Africa Community arrangement. The Kagera Basin Organization was established with the primary goal of alleviating poverty and achieving socio-economic development in the Kagera sub-basin region. But because the KBO was built on a weak social resources’ foundation, it lacked the adaptive capacity to survive the historical, political and cultural dynamics among the riparian countries.

One of the key projects commissioned by KBO was to undertake a study on harnessing hydroelectric power at Rusumo Falls on the Kagera and the environmental and commercial implications of such development. The funding proposal to develop Rusumo power project among others was scheduled to be submitted in June 1995 but was called off following the April to July, 1994 genocide in Rwanda.
NELSAP-CU was established in December 1999 by the Council of Ministers for Water Affairs in the Nile River Basin, with a mission to “contribute to the eradication of poverty, promote economic growth, and reverse environmental degradation in the Nile Equatorial Lakes (NEL) region, within the overall NBI’s shared Vision of sustainable socioeconomic development and the equitable use of and benefit from Nile Basin water resources”.

The development of the RRFHP idea was revived in 2006 and championed by Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU), the investment arm of the Nile Basin Initiative (NBI). NELSAP-CU coordinated the preparation and signing of several important agreements by the three beneficiary countries. In March 2005, Ministers in charge of Energy Affairs in Burundi, Rwanda and Tanzania signed a Communique declaring their commitment “to jointly develop the Project and accompanying activities such as water resources management, catchment management and environmental management”. A year later in 2006, the Ministers signed a Joint Project Development Agreement (JPDA) to carry out optimization and feasibility studies.

The countries jointly mandated NELSAP-CU to coordinate the development of studies and later the implementation of the RRFHP. The Project Development Agreement recognized the importance of international cooperation on shared water resources and benefits for riparian states. The three countries recognized that cooperation over the development of the RFFHP would allow for better management of ecosystems for power production and other uses. The sharing of Kagera and Ruvubu waters in addition to reducing transaction costs, was seen as catalyst to economic and regional integration.

Other key agreements signed include the Tripartite Agreement signed in February, 2012 in which the partner states reaffirmed and recorded their commitment to jointly develop, finance, own and operate the project in accordance with the principles of the Agreement. The Agreement also paved way for NELSAP-CU to continue the pre-implementation arrangements for the project. This was followed by the signing of the most crucial documents namely the ‘Implementation Agreement’ and the ‘Shareholders Agreement’ in September 2013.

The 2012 Tripartite Agreement guided to formation of:

- Council of Ministers for Energy (COM)
- Project Implementation Committee (PIC)
- Technical Advisory Committee (TAC)
- Project Steering Committee (PSC)
- Rusumo Power Company Limited (RPCL)
- RPCL Board of Directors

Other key agreements:

- 2013 Shareholders Agreement
- 2013 Implementation Agreement
- 2013 Financing Agreements
- 2013 Subsidiary Agreements
- 2013 Project Agreement
- 2013 Power Purchase Agreements
- 2014 Project Implementation Support Agreement

Financial Arrangement: World Bank Financing the Power Plant

- Financial negotiations: July 2013
- Board approval: August 2013
- Financial agreements: October 2013
- Project effectiveness: July 2013
3. PROJECT PURPOSE/OBJECTIVES, COMPONENTS AND BENEFITS

a. Project Purpose and Objective

The project overall objective is to increase the supply of electricity to the national grids of Rwanda, Tanzania and Burundi and comprises of construction of an 80MW Power Plant including the associated three transmission lines. The generated electricity will be equally shared among the three countries each benefiting about 26MW transported to the national grid through the transmission lines. www.rusumoproject.org

b. Project Components

The RRFHP has four main sub-components:

- Civil Works/ Supply and Installation of Hydro-Mechanical Equipment
- Supply and Installation of Electro-Mechanical Equipment
- Livelihood Restoration Program (LRP) for the People Affected Persons (PAPs) and
- Local Area Development Plan (LADP).

c. Project benefits

Rusumo Project will benefit the three energy-strapped countries as a good initiative that will improve socio-economic livelihood of the riparian communities neighbouring the Project area. Once operational, the Project will bring 80 MW of renewable, clean, relatively low-cost power to the national grids of Burundi, Rwanda and Tanzania, shared equally.
Rusumo Power Company Limited (RPCL) is a special purpose company incorporated under the laws of Rwanda and was registered with Rwanda Development Board in 2013. RPCL also maintains a certificate of compliance in Tanzania.

RPCL is jointly and equally owned by the Governments of Burundi, Rwanda and Tanzania. The three respective national utilities REGIDESO, RE and TANESCO will get approximately 27MW during the operation of the Plant.

RPCL is currently fast-tracking the implementation of the RRFHP and finalizing negotiations of the Power Purchase Agreements.

a. RPCL Governance

The three Ministers responsible for Energy in each of the shareholder countries are the representatives of the shareholders; they compose the Project Council of Ministers (CoM).

Council of Ministers (CoM)

Rwanda: Hon Dr Eng. Ernest NSABIMANA, Minister of Infrastructure (CoM Chair)
Burundi: Hon Eng. Ibrahim UWIZEYE, Minister for Energy (CoM Member)
Tanzania: Hon January MAKAMBA, Minister for Energy (CoM Member)

Each shareholder appointed two directors and two independent members recommended by the nominee Board members; they compose the RPCL Board of Directors (BoD).

RPCL Board of Director

- **Rwanda:** Eng. Felix GAKUBA, Chairman / Mr. Gerald MUGABE (Member)
- **Burundi:** Eng. Nolasque NDAYIHAYE (Member)/Mr. Didace NDERICIMPAYE (Member)
- **Tanzania:** Eng. Innocent LUOGA (Member) / Mr. Nuru NDILE (Member)
- **Independent Members:** Eng. Ezekiel KASARO, Zambia (Substantive) / Eng. Albert MUGO, Kenya (Alternate)

The Project Steering Committee is a technical advisory organ that interacts on regular basis with NELSAP Project Implementation Unit to take stock of the Project progress.

Project Steering Committee (PSC)

- **Rwanda:** Eng. Tom RWAHAMA (Chair) / Eng. Theoneste HIGANIRO
- **Burundi:** Eng. Gaëthan NICAYENZI / Eng. Come NKURUNZIZA
- **Tanzania:** Eng. Costa RUBAGUMYA / Eng. Salum INEGEJA

RPCL is headed by a Managing Director (MD) who reports to the RPCL BoD through the Board Chairperson. RPCL MD is supported by a Senior Management Team composed of the Plant Manager and the Finance Administration Manager as well as a team of 48 staff to support RPCL’s Management.

RPCL Website: [www.rusumorpcl.com](http://www.rusumorpcl.com)
b. NELSAP Governance

The Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) headquartered in Kigali, Rwanda, is one of the two investment programs of the Nile Basin Initiative (NBI), the other being the Eastern Nile Subsidiary Action Program (ENSAP) headquartered in Addis Ababa, Ethiopia known as Eastern Nile Technical Regional Office (ENTRO).

NELSAP is governed by the Nile Equatorial Lakes Council of Ministers (NEL-COM), the highest political and decision-making body composed of 10 Ministers in charge of Water Affairs in the Nile Basin Member States.

NELCOM is supported by the Nile Equatorial Lakes Technical Advisory Committee (NEL-TAC), comprised of 20 senior government officials, two from each of the Member States.

The Nile Basin Council of Ministers (COM) convenes at the beginning of every fiscal year to address the strategic direction on the use of the shared resources of the Nile River Basin. This governance body receives updates on the progress of key regional investment projects under NBI and guides on implementation. The Council of Ministers (COM) approves new transboundary investment projects, national projects with transboundary significance and regional basin wide strategies on equitable utilization of and benefits from the common Nile Basin waters. The Council of Ministers also approves of the work plan and budget for the subsequent financial year.

RRFHP Website: www.rusumoproject.org

The Nile Basin Executive Director: Eng. Sylvester MATEMU
NELSAP Regional Coordinator: Eng. Dr. Isaac ALUKWE
NELSAP Rusumo Project Manager: Eng. Alloyce ODUOR

5. COMPLETED ACTIONS DURING PREPARATION PHASE

NELSAP Rusumo Project Implementing Unit (PIU) conducted Project’s preparatory activities, moved it to implementation phase and is nearing completion of the construction phase:

a) NELSAP selected and hired the Owners’ Engineer (OE) AECOM-ARTELIA JV which started on 21st April 2014 and completed the Project Technical Designs


c) NELSAP selected and hired the Contractor for Contract Package 2 (CP2): ANDRITZ Hydro from Germany/India for Supply and Installation of the Electro-Mechanical Equipment in 2016

d) Compensation of all the Project Affected Persons (PAPs): 60 households and 1 commercial group in Rwanda and 108 households and 3 commercial groups in Tanzania: a total USD 3.1 million were paid out to the PAPs as compensation in the two Districts Ngara in Tanzania and Kirehe in Rwanda.

e) NELSAP conducted Environmental Baseline Studies among others: (i) fish baseline survey, (ii) the spray zone biodiversity survey and (iii) the water quality baseline study
The overall progress of the Regional Rusumo Falls Hydroelectric Project is as of July 2022:

- Total Power Plant Progress: 95%
- CP1: Hydro mechanical (Civil) works: 97%
- CP2: Electromechanical works: 92.5%

![The Dam](image1)
![Power intake](image2)
![The Head Race Tunnel (HRT)](image3)
7. ENVIRONMENTAL & SOCIAL SAFEGUARDS

Environmental, Social, Health and Safety (ESHS) Management

The Environmental and Social Risks of the RRFHP are evaluated as high and impacts significant. Contractors developed detailed assessments and mitigation plans covering all aspects of Environmental, Social, Health and Safety (ESHS).

Environmental Social Health Safety Management Plan during construction includes:

1. Erosion and Sediment Control
2. Spoil Disposal Management
3. Quarry Management
4. Solid Waste Management
5. Hazardous Products and Waste Management
6. Wastewater Management
7. Emergency Preparedness and Response
8. Water Quality Monitoring
9. Air Emission and Dust Control
10. Noise and Vibration
11. Site Decommissioning and Rehabilitation
12. Management of Physical Cultural Resources (PCR)
14. Worker Camps Management
15. Recruitment and Labor Management
16. Road Traffic and Site Access
17. ESHS Training

Rotor Unit 3 Ongoing Assembly
Service Bay-Runner, Lower Bracket, Rotor and Stator assembly for Unit 3 is ongoing
1) Livelihood Restoration Program

The Livelihood Restoration Program (LRP) was established to restore livelihood of Persons Affected by the Project in Rusumo area in Kirehe district, Rwanda and Ngara district, Tanzania for about USD 711,000.

<table>
<thead>
<tr>
<th>Country</th>
<th>Rwanda</th>
<th>Tanzania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Province/Region</td>
<td>Eastern Province of Rwanda</td>
<td>Kagera region of Tanzania</td>
</tr>
<tr>
<td>Lead District</td>
<td>KIREHE</td>
<td>NGARA</td>
</tr>
<tr>
<td>Sectors</td>
<td>Kigarama and Nyamugali</td>
<td>Rusumo Area</td>
</tr>
<tr>
<td>Cell</td>
<td>Nyankurazo, Rusumo and Kiyanzi</td>
<td>Rusumo Area</td>
</tr>
<tr>
<td>Villages:</td>
<td>Nyakabungo, Nyakwisi, Nshungerezi, Ruhuha and Rusumo West, Rusumo East</td>
<td>Rusumo Village</td>
</tr>
<tr>
<td>Total participating households</td>
<td>61</td>
<td>108</td>
</tr>
<tr>
<td>Total PAPs participants</td>
<td>127 PAPs</td>
<td>227 PAPs</td>
</tr>
<tr>
<td>Lead institution</td>
<td>Kirehe district</td>
<td>Ngara district</td>
</tr>
<tr>
<td>Implementing process</td>
<td>• Community based program implemented by affected communities under the community procurement process.</td>
<td></td>
</tr>
<tr>
<td>Terms of Budget</td>
<td>A Grant Agreement signed between NELSAP and the Community of Project Affected People (CPAP)</td>
<td></td>
</tr>
</tbody>
</table>

Program components

- **Sustainable Agriculture Development**
  - Vegetables (Tomatoes and Cabbages)
  - Beans & Soya Beans
  - Mushroom production
  - Banana productivity
  - Avocado crop production
  - Sunflower crop production

- **Livestock Development**
  - Rabbit farming
  - Cattle zero grazing
  - Poultry production
  - Goat keeping
  - Piggery
  - Apiculture (beekeeping)
  - Fishery and fish farming

- **Off-farm Business**
  - Hair dressing
  - Tailoring
  - Restaurant
  - Stock and sale of agricultural commodities
  - Modern bricks making
  - Improved stove making
Local Area Development Plan (LADP)

Rusumo Project is also giving back to riparian communities surrounding Rusumo Project’s construction area by implementing the Local Area Development Program (LADP), a benefit-sharing program worth 15 Million US Dollars designed to enhance regional economic and social development in the Rusumo area as an extended program related to the construction of Rusumo Project commandeered by respective districts and communes.

LADP was formulated in a participatory process whereby each district identified their respective priority investment areas. The management of LADP is executed by respective districts under the supervision of the Rusumo Project Implementation Unit. LADP is funded by the World Bank under the RRFHP framework.

LADP commenced in 2017 in Busoni Commune (Kirundo Province, Burundi) and Giteranyi Commune (Muyinga Province, Burundi), Ngara District (Kagera region, Tanzania) and Kirehe and Ngoma Districts (Eastern Province, Rwanda).

Burundi

LADP program is implemented in Giteranyi Commune, Muyinga Province with:
• Rehabilitation and extension of 30 km water system in Giteranyi Commune in Gihuzu, Mugano, Rubenga
• Construction of Giteranyi Youth Center in Ruzo village
• Construction of Bugoma Health Center
• Construction of Giteranyi Commune Head Office

LADP program is also implemented in Busoni Commune, Kirundo Province with:
• Rehabilitation and extension of 39 km water system in Busoni Commune in Bishisha, Kigeri, Rutabo with source points in Gacamihigo, Rurira, etc
• Construction of Busoni Youth Center
• Construction of Rugando Health Center

Tanzania

LADP program is implemented in Ngara District with the following sub-projects:
• Rusumo Water Supply Project in Rusumo Village with 6 water points in Ngoma sub-village
• Rehabilitation of water systems in 4 villages (Mshikamano, Kasulo, Rwakalemela and Kasharazi)
• Construction of Rusumo Health Center
• Improvement of Lemela Folk Community Development College (FDC): Rehabilitation of 2 Workshops & construction of playing ground
• Construction of Bukiriro Secondary School
• Construction of Lukole Health Center
• Construction and Rehabilitation of Rusumo Secondary School buildings
• Construction of Rusumo dispensary in Kyenda Village
• Construction of Mumiterama Secondary School
• Construction of Rusumo Primary School
Rwanda, LADP program is implemented in Kirehe and Ngoma Districts, of the Eastern Province:

**Kirehe District:**
- Construction of Kagina Health Center
- Rehabilitation of 30 km of feeder road in Kigarama and Musaza, Cyagasenyi – Gasarabwayi - Nganda Road

**Ngoma District:**
- Rehabilitation and extension of 30 km water system in Giteranyi Commune in Gihuzu, Mugano, Rubenga
- Construction of Giteranyi Youth Center in Ruzo village
- Construction of Bugoma Health Center

Local Area Development Program (LADP) is improving livelihood of shareholders’ citizens, specifically Rusumo communities in improving access to potable water and hygiene to Rusumo communities, a healthy environment, an empowered youth and educated generation.
9. COMMUNICATION AND STAKEHOLDER ENGAGEMENT

The Project implement intensive development communication and community engagement activities to enhance public understanding of the Project’s benefits, to build confidence among Rusumo communities including awareness raising on Environmental, Social Health Safety.

Project Stakeholders include:
1. Rusumo communities on Rwanda and Tanzania sides
2. Districts/Communes & Region/Provinces neighboring the Project sites:
   - Burundi: Busoni Commune / Kirundo Province / Giteranyi Commune / Muyinga Province
   - Rwanda: Kirehe District / Ngoma District / Eastern Province
   - Tanzania: Ngara District / Kagera Region
3. Institutions that facilitate Free Movement of Personnel, Equipment and Materials in Shareholders countries
4. National Labor, Social Security and Taxes Institutions
5. Local, national, regional and international Media
6. The General public

Through various engagement initiatives, NELSAP PIU maintain continuous good relationships with the local communities. Communication and engagement of Rusumo Communities remain permanent; communities are kept informed on Project status on Blasting Effects.

10. OTHER PROJECT BENEFITS

Employment Opportunities

The construction activities have created more than 1,000 job opportunities to shareholders’ citizens, especially to communities surrounding Rusumo construction sites in several aspects of works to skilled and casual laborers in administration, laboring, security, janitors, kitchens, traffic management from both civil contractor (CP1) and electromechanical contractor (CP2) and their respective subcontractors including Rwandans, Tanzanians and Burundians being employed by both contractors. Employment also considers workers of other nationalities such as South Africa, Ugandans, Ethiopians, Portugal, Slovenia, Austria, Indonesia, Sri Lanka among others. Surrounding local business women and men are benefiting from the Project.

CP1 and CP2 Purchase of local construction supplies such as steel cement wood sand and rental equipment. Other indirect benefits include the contribution of employees’ salaries to the local economies, educational opportunities for the local schools, enhancement of skills in the local workforce to name but a few. Local sub-contractors provide supplies and logistics to the main contractors, such as food supplies, vegetables, fruit etc.
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