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**THIS ACTION IS FUNDED BY THE EUROPEAN UNION**

**ANNEX**

to the Commission Implementing Decision amending Commission Implementing Decision C(2023)7830 final of 13.11.2023 on the financing of the multiannual action plan in favour of the Republic of Uganda for 2023-2024

**Action Document for Nalubaale and Kiira hydropower plant rehabilitation project**

**MULTIANNUAL PLAN**

This document constitutes the annual work programme within the meaning of Article 110(2) of the Financial Regulation, within the meaning of Article 23 of the NDICI-Global Europe Regulation.

**1 SYNOPSIS**

**1.1 Action Summary Table**

<b>1. Title CRIS/OPSYS business reference Basic Act</b>	Nalubaale and Kiira hydropower plant rehabilitation project ACT-61710 Financed under the Neighbourhood, Development and International Cooperation Instrument (NDICI-Global Europe)
<b>2. Team Europe Initiative</b>	No
<b>3. Zone benefiting from the action</b>	The action shall be carried out in Jinja, Eastern Region, Uganda
<b>4. Programming document</b>	Uganda multi-annual indicative programme (MIP) 2021-2027
<b>5. Link with relevant MIP(s) objectives / expected results</b>	Specific objective 2.2 - Pertaining to Economic enablers and connectivity “Supporting the productive sectors’ sustainable energy, transport and digital connectivity” / Expected result 2.2.b: Access to reliable electricity for households, businesses and industries is increased
<b>PRIORITY AREAS AND SECTOR INFORMATION</b>	
<b>6. Priority Area(s), sectors</b>	Priority Area 2 - Promoting Sustainable and Inclusive Growth and Jobs Energy – 230 DAC
<b>7. Sustainable Development Goals (SDGs)</b>	Main SDG (1 only): SDG 7 Other significant SDGs (up to 9) and where appropriate, targets: SDG5, SDG 8; SDG 9, SDG10,SDG13 and SDG17
<b>8 a) DAC code(s)</b>	23220 - Hydro-electric power plants - 70% 14040 – River basins development – 30%
<b>8 b) Main Delivery Channel</b>	Third Country Government (Delegated co-operation) - 13000

<b>9. Targets</b>	<input type="checkbox"/> Migration <input checked="" type="checkbox"/> Climate <input checked="" type="checkbox"/> Social inclusion and Human Development <input checked="" type="checkbox"/> Gender <input type="checkbox"/> Biodiversity <input type="checkbox"/> Education <input type="checkbox"/> Human Rights, Democracy and Governance			
<b>10. Markers</b>  <b>(from DAC form)</b>	<b>General policy objective @</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Participation development/good governance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Aid to environment @	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Gender equality and women's and girl's empowerment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Reproductive, maternal, new-born and child health	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Disaster Risk Reduction @	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Inclusion of persons with Disabilities @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Nutrition @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>RIO Convention markers</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Biological diversity @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Combat desertification @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change mitigation @	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Climate change adaptation @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>11. Internal markers and Tags:</b>	<b>Policy objectives</b>	<b>Not targeted</b>	<b>Significant objective</b>	<b>Principal objective</b>
	Digitalisation @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	digital connectivity digital governance digital entrepreneurship digital skills/literacy digital services	YES <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	NO <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	/
	Connectivity @	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	digital connectivity energy transport health	YES <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	NO <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	/

	education and research			
	Migration @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Reduction of Inequalities @	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Covid-19	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>BUDGET INFORMATION</b>				
<b>12. Amounts concerned</b>	<p>Budget line(s) (article, item): 14.020121</p> <p>Total estimated cost: EUR 170 000 000</p> <p>Total amount of EU budget contribution: EUR 30 000 000</p> <p>This action is co-financed in joint co-financing by:</p> <p>Agence Française de Développement (AFD) for an amount of EUR 75 000 000</p> <p>European Investment Bank for an amount of EUR 65 000 000</p> <p>The contributions are from the general budget of the European Union for N+1, subject to the availability of appropriations for the respective financial years following the adoption of the relevant annual budget, or as provided for in the system of provisional twelfths.</p>			
<b>MANAGEMENT AND IMPLEMENTATION</b>				
<b>13. Type of financing</b>	<p>This contribution to the Regional Blending Platform shall be implemented by AFD and EIB in indirect management or by the entities indicated in the annex to this Action Document, in accordance with the Regional Blending Platform's award procedure.</p>			

## 1.2 Summary of the Action

Uganda has currently 1235MW of total installed generation capacity of mainly renewable energy. Hydropower accounts for 90% and it is concentrated on the Nile River where several hydropower plants operate in a cascade scheme. As the Nalubaale-Kiira hydropower plant (NKHPP) is located at the outlet of the Lake Victoria and at the peak of the hydropower cascade it is a crucial infrastructure for controlling the water level on the Victoria Lake and water discharges on the Nile River what affects 290 million people in the Nile Basin. NKHPP 380MW of renewable energy accounts for 30% of the installed capacity in Uganda. It also provides the cheapest electricity to the Ugandan grid network (USD cents 1.2 per kWh) what contributes to contain the cost of electricity and increase affordability to it. However, NKHPP is almost 70 years old and its generation units have reached their lifespan what increases the risk of failure and therefore forced outages and black-outs affecting the grid stability and the country productive economy.

In this context, the specific objectives of the action are twofold: 1) to guarantee provision of green, affordable and reliable renewable energy by refurbishing of NKHPP turbines and electro-mechanical equipment and carrying out ancillary civil works, and; 2) to ensure economic/social infrastructure and livelihoods protection on the Nile River Basin by improving NKHPP resilience against climate change. This should contribute to the general objective of securing and extend access to clean energy (SDG7) beyond the actual 19% access rate to the grid to 60% by 2030 as per the Uganda National Development Plan III and to support further sustainable industrialisation (SDG9) while making more resilient the country and the Nile Basin against climate change impact (SDG13)

## 2 RATIONALE

### 2.1 Context

#### Country

Uganda is facing a high population growth, insufficient investments in social sectors, high unemployment and pressure on natural resources. Uganda's population is currently estimated to be 45.9 million (annual population growth of 3.3 %) of which 84 % is considered rural and about 50 % under 15 years of age. It is estimated that Uganda's population will grow to over 60 million in 2030 and 100 million in 2050. Moreover, Uganda hosts more than 1.4 million refugees resulting mainly from long lasting armed conflicts in neighbouring Democratic Republic of Congo and South Sudan adding pressure on environment, natural resources and social services. With fertile soils and regular rainfall, agriculture is the most important sector of the economy, employing over 80 % of the work force. In particular, 68% of women's main activity is agriculture.<sup>1</sup> The Covid-19 pandemic has exacerbated socio-economic problems, increasing poverty and inequalities, in particular for women. According to the World Economic Forum's annual Global Gender Gap report for 2022, Uganda ranks 61st in the Global Gender Gap Index and 73rd in the Economic Participation and Opportunity sub-index.<sup>2</sup> The lack of prospects for youth is a key driver of conflict. There is shrinking space for civil society organisations (CSOs), human rights defenders and environmental activists. Government's fiscal space has narrowed despite a GDP increasing growth (5.5% expected for 2023) driven by investments in the oil and gas sector and return to normality after Covid-19. Public debt saw a sharp rise, leading to a shift from low to moderate risk of debt distress. The IMF extended credit facility of USD 1 billion approved in July 2021 is currently under review.

#### Energy sector

The grid only services 19% of the population and more than 45% continue to lack access to modern, clean and sustainable sources of electricity, with women and girls being the most adversely impacted. It is estimated that 34% of the population would have reached an access to electricity through off-grid solutions, mainly via solar home systems. Regarding cooking, 95% of the population relies on biomass, either firewood or charcoal, what is responsible for alarming rates of deforestation, losses of biodiversity and soil erosion. On the transmission side, the network has expanded over 50% in the last two decades, but is still unable to cover the country's needs (important disparities persist between regions). Interconnections with neighbouring countries remain inexistent with the exception of Kenya. Grid losses average 16.4%. The national electricity demand is growing at a steadily annual rate of 8% reaching already a peak of 863 MW, however the average consumption of electricity per capita remains amongst the lowest in Africa. The installed generation capacity is 1253MW but availability is below 80% what results in frequent outages<sup>3</sup> and/or the need to run the Namanve thermal power plant (50MW heavy oil)

Nalubaale (180MW) and Kiira (200MW) Hydropower plants (NKHPP) are both located on the River Nile in Uganda about 3 km from its source, Lake Victoria. The plants are run-off river and operate in parallel. They are a key facility for energy generation in Uganda as theoretically represent 30% of the total generation installed capacity.

Without major rehabilitation, Nalubaale Power station is possibly at the end of its lifetime whereas Kiira is still in a reliable operating condition but limited in part load operation. Both HPPs are owned by the public company Uganda Energy Generation Company Limited (UEGCL). Both power plants are fundamental as they regulate discharges from the Lake Victoria, the second largest freshwater lakes of the world and the main source of the Nile River, which has a length of 6 695 km. Therefore, millions of people on the shorelines of Lake Victoria and the Nile River water basing are affected/dependant on the waters level and flow regulated by NKHPP.

The feasibility study for the rehabilitation of NKHPP was concluded in 2019 with support from the German government. It indicated that the generation units at NHPP are in very poor conditions reducing the plant reliability and increasing the chances of failure and forced outages in near future. The Consultant's assessment also

<sup>1</sup> United Nations, Department of Economic and Social Affairs Statistics Division, "Statistical Yearbook 2022 edition", New York, 2022

<sup>2</sup> World Economic Forum, Global Gender Gap Report 2022, July 2022.

<sup>3</sup> A serious incident at Isimba hydropower plant (180MW) in August 2022 resulted in at least one month of load-shedding and recurrent outages.

concludes, that for further reliable operation of Nalubaale and Kiira HPPs, the rehabilitation or replacement of the mechanical turbine equipment and electrical equipment is urgently recommended. The economic and financial analysis confirm the viability of the rehabilitation of the 10 generation units at Nalubaale HPP.

### Policy Framework

Energy is key for the country's development; therefore, it has a prominent place in the Uganda NDP III (2021-2025) and the Uganda Vision 2040. The Plan aims to increase access to electricity, improve reliability of the network through, among others, investing more in evacuation and transmission to areas where it can be used such as in industrial parks and in economic zones. The Plan considers access to energy as crucial for the country's industrialisation and urbanization, and therefore as a driver for socio-economic transformation. The Plan responds to the Government's commitment and ambition to reach the Sustainable Development Goals, in particular those related to universal energy access (SDG7), climate change (SDG13), decent work and economic growth (SDG8), resilient infrastructure and sustainable industrialization (SDG9), sustainable communities (SDG11), gender equality (SDG 5) and reduced inequalities (SDG10). Specifically, the Plan states in its chapter on human capital development that one of its objectives is to reduce vulnerability and gender inequality along the lifecycle. The NDP III intends to increase the national grid access rate to 60%, up from the current 19%, to reach an average consumption per year exceeding 550kWh and to reduce the cost of electricity to \$0.05kWh for all categories of consumers. In terms of systematising the cost electricity, the Government has kick-started the reform of the electricity sector that should conclude with the merging of all the public companies operating in the electricity sector in a move to improve efficiency. In addition, the national electricity bill has been amended to facilitate direct selling agreements between energy producers and major consumers but also to reinforce the performance and financial independence of the regulator. Other important policy documents are the National Energy Policy, the National Electrification Strategy, the mini-grids regulation or the National Determined Contributions to the Paris Agreement. Additional efforts to electrify the country are reflected in the Government's funding and implementation of the Electricity Connection Policy and the funding support to scale up the mini-grids. In 2021, Government has also developed the National Action Plan on Business and Human Rights, reinforcing its commitment to the promotion and protection of human rights in all business operations. The Plan calls for the promotion of social inclusion and the rights of individuals and groups in vulnerable and marginalised situations in private sector operations in the country, with special emphasis on women and people with disabilities, among others. Moreover, the action will be consistent with the principles of integrated water resource management, in particular with the Catchment Management Planning Guidelines from the Ministry of Water and Environment and commitments made by Uganda under the Nile Basin Initiative.

### EU policy

Renewable energy is at the core of the EU Green Deal not only as a way to decarbonise the economy and improving energy security, sustainability and affordability but also as the way to promote the recovery from the Covid-19 induced economic crisis. Empowering women in the support to partner countries' efforts to improve access to clean energy is also stated in the Gender Action Plan III<sup>4</sup>. Specifically, this action is aligned with the following thematic areas of engagement of GAP III: "Addressing the challenges and harnessing the opportunities offered by the green transition and the digital transformation" and "Promoting economic and social rights and empowering girls and women". Further deployment of renewable energy to sustain economic growth and jobs creation is part of the EU-Africa Alliance for Sustainable Investments and Jobs. Moreover, the EU Global Gateway strategy points towards energy infrastructure as a key element to increase productivity, connectivity and promote energy security across the African continent. In Uganda, access to energy is one of the key indicators selected to reflect the EU's cooperation impact within the MIP, in particular via interventions within the Priority Area 2 Promoting sustainable and inclusive growth and jobs.

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<sup>4</sup> The [Gender Action Plan III](#) is a Joint communication by the Commission and the High Representative of the Union for Foreign Affairs and Security Policy which was welcomed through [EU Presidency Conclusions](#) of 16 December 2020 endorsed by 24 Member States.

## 2.2 Problem Analysis

Promoting sustainable and inclusive growth and jobs cannot be achieved in the absence of affordable, reliable, secure and sustainable energy. Therefore, the action is aiming to bring solutions to the following problems:

- Low access rate to clean, sustainable and affordable energy in the country and therefore lack of opportunities to generate new income opportunities and jobs for a rapidly growing population, in particular for youth and women empowerment. 45% of the population is lacking access to energy of which 84% is in rural areas. In particular, women experience several problems linked to the lack of opportunities: 38.5% of women over 15 are employed below the poverty line, and 50% of female-headed households suffer from multidimensional poverty. In addition, 87% of women work in the informal sector in non-agricultural jobs, salaried women earn 27% less than men, and the proportion of young people (15-24 years old) without education, employment or training is 37.6 for women compared to 21.4 for men<sup>5</sup>.
- Low level of industrialisation and economic activity which is reflected in the low consumption of energy per capita, 215kWh/year against a Sub-Saharan Africa average of 552kWh/year.
- Regular power outages and power instability affecting the productivity and competitiveness of existant manufacturing industry and deterring investments in the country. Indeed, with Nalubaale HPP as the main provider of primary reserve for the Uganda's power sector, a forced outage of the Nalubaale units and limited availability of the plant might consequently also lead to larger black-outs and have wider systemic consequences in the Uganda power system.
- High electricity tariffs as a consequence of multiple factors including procurement of energy from relatively expensive IPPs. NKHPP is actually supplying the cheapest power in the country at only USD cents 1.26 kWh.
- Readiness to cope with climate change negative impacts on economic infrastructures and communities' livelihoods along the Lake Victoria and the Nile River due to rain pattern variation and extreme weather events.
- Lack of capacity at the public generation company, UEGCL, to operate, maintain and manage efficiently the generation assets its own due to the fact that the assets were in concession till recently (NKHPP, Namanve thermal power plant) or they were just commissioned (Isimba HPP, Karuma HPP).

Identification of main stakeholders and corresponding institutional and/or organisational issues (mandates, potential roles, and capacities) to be covered by the action:

- Ministry of Energy and Mineral Development (MEMD) is responsible for the follow up of this action in the framework of the National Energy Policy and the implementation of the NDP III. The Ministry is well staffed and enjoy extended technical support from other development partners mainly Germany and the World Bank.
- Ministry of Water and Environment (MWE) is responsible for engaging at the regional level with the Nile Basin Initiative and the East African Community. MWE is also responsible for authorising water abstraction and discharges from Lake Victoria.
- Uganda Energy Generation Company Limited (UEGCL) will be responsible for the implementation of the action. UEGCL is the holding company for state-owned generation assets.
- The Electricity Regulatory Authority (ERA) is an independent body with the role of regulating, sanctioning and supervising in the area of electricity. ERA regulates licensing, generation, transmission, and distribution. Therefore, in the frame of this action, ERA is intended to approve necessary investments for the rehabilitation of NKHPP and take then in consideration when fixing tariffs for electricity.
- The private sector. The involvement of the private sector is expected in the implementation of service and works contracts.
- The European Finance Institutions (EFIs), some of them with local presence, are expected to participate in the action through a blending approach providing a concessional credit to the Government.
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<sup>5</sup> <https://www.data.unwomen.org/country/uganda>

### 3 DESCRIPTION OF THE ACTION

#### 3.1 Objectives and Expected Outputs

The Overall Objective (Impact) of this action is to catalyse sustainable growth and employment in Uganda

The Specific Objective (Outcome) of this action is:

1. To guarantee provision of green, affordable and reliable renewable energy
2. To ensure economic/social infrastructures and livelihoods protection on the Nile River Basin .

The Outputs to be delivered by this action contributing to the corresponding Specific Objective (Outcome) are

- 1.1 Power generation capacity from renewable energy at Naalubale-Kiira hydropower plant is improved
- 2.1 UEGCL capacity to manage electricity production and flood control at Nalubaale-Kiira hydropower plant is increased

#### 3.2 Indicative Activities

Activities relating to Output 1.1

- 1.1.1 Refurbishment and modernisation of Nalubaale hydropower plant (NHPP) turbines and related electro-mechanical equipment and of civil works.

Current generation units at NHPP were installed between 1954-1968 and refurbished in the 1990s. On a statistical basis, especially generation units at Nalubaale are likely to fail with a high probability on a short-term view. Moreover, the main monitoring and operating systems have exceeded their lifespan. The Action therefore aims to support the replacement of the ten (10) Propeller turbines (each of 18MW) installed at the Nalubaale power station and upgrade of related equipment. This includes also the digitalization by installation of the Supervisory control and data acquisition (SCADA) system to support further monitoring in real time, floods control and integration into a dispatch centre coordinating power production along the Nile cascade. The power plant control room is also expected to be upgraded. Rehabilitation of the units is expected to be done in a phase manner to ensure some continuity on the supply of power, although at reduce rate. Renovation and improvement of civil works to reinforce safety, protection and more efficient operation of the hydropower plant, will be also included. The latter refers to river bank protection against erosion, power intake protection or structural stability reinforcement at the power house among others.

- 1.1.2 Major overhaul of Kiira hydropower plant

Kiira HPP is in operation since the 1990's and generally still in substantially better conditions than Nalubaale. Nonetheless, a thorough overhaul of the equipment is recommended in the feasibility study. These 'short-term actions' are essential to retain the reliability and availability of generating units and to ensure the safe operation of the plant. Overall costs for these measures constitute a fraction of the cost for Nalubaale, but the timing in connection with the works on the other plant is ideal, and one of the aims is also to integrate both plants in a common control setup.

The foreseen measures on the mechanical equipment include e.g. re-coating of wetted turbine parts, modernizing turbine instrumentation, inspection and refurbishment of guide bearings of general alignment.

The generator static and dynamic components will require thorough cleaning. It is further foreseen to modernize the control equipment and to integrate the Kiira power units in the Nalubaale joint control, whereas also sensors and cabling will mostly be replaced.

From a gender perspective, in both activities a balanced and active participation of women in the working teams will be promoted. Also, if relevant, additional energy requirements for powering assistive products to people with disabilities will be considered.

Activities relating to Output 2.1:

#### 2.1.1 Capacity building of UEGCL to manage electricity production and flood control

Avoiding or minimising catastrophic impact from extraordinary weather events associated to climate change and sustain power production in sustainable and efficient manner can be achieved by supporting the capacity of NKHPP's operator. Thus, UEGCL is expected to benefit from tailored training and provision of software and technologies to perform on the sustainable management of water and increase resilience to climate change on the Nile/Victoria basin. The activity will be complementary with ongoing and planned activities to support of the management of the Nile basin. Specific topics for this activity will be discussed during approval of the blending proposal at the AIP but it is expected that dedicated programmes to cover water reservoir management, flood management, use of modelling tools, key practices for reliable O&M, safety procedures and/or environmental (water weed and waste control) and socio-economic safeguards. The topics to be addressed in the capacity building process will integrate a gender-sensitive approach, whenever possible.

### 3.3 Mainstreaming

#### **Environmental Protection & Climate Change**

##### **Outcomes of the EIA (Environmental Impact Assessment) screening**

The EIA screening classified the action as Category B (for which an EIA will be undertaken). According to the Uganda National Environment Act, 2019, this particular project is listed under category 3 meaning the project developer is required to undertake an environmental and social impact study as prescribed by regulations.

The environmental studies are to be covered by an additional funding envelope and will be a pre-condition for the start of the activities under this Action. The ESIA scoping is already ongoing and funded under the 11<sup>th</sup> EDF Technical Support Programme II to the Government of Uganda. It is expected that full ESIA is completed (or well advanced) before the proposal from the EFIs is submitted to the Africa Investment Platform. The ESIA will include a gender-sensitive approach.

Furthermore, due to the nature of the action and its activities (rehabilitation of an existing infrastructure), the overall impact on the environment is expected to be positive because of increasing/maintenance of renewable generation capacity in the country and better regulation of Lake Victoria water level, protection against floods and reduction of pressure/degradation of natural ecosystems.

##### **Outcome of the CRA (Climate Risk Assessment) screening**

The Climate Risk Assessment (CRA) screening concluded that this action is no or low risk (no need for further assessment). The project aims to sustain the transition towards clean energy by maintaining/increasing the production of energy from renewable energy, hydropower. The Action is part of the Uganda strategy to meet the Nationally Determined Contributions' (NDC) target.

##### **Gender equality and empowerment of women and girls**

As per the OECD Gender DAC codes identified in section 1.1, this action is labelled as G1. This implies that the action will contribute to women empowerment by prioritizing their access to economic infrastructure (electricity access), providing job opportunities, improving access to social services such as health and education, freeing time for more productive tasks at home, improving security against gender based violence, reducing respiratory related diseases or increasing income among other benefits. In order to better seize the opportunity to support women during this action, particular regard will be given to the basic needs and strategic interests of women at the elaboration of environmental and socio-economic impact assessment, implementation of the mitigation measures and capacity building related activities. Women's participation will be encouraged in community liaison groups

and other representative groups on works sites. Moreover, the project monitoring system to be put in place at the implementation will collect and report data and indicators (on workforce, awareness campaigns, trainings, connections, etc.) disaggregated by gender to better assess the action's impact on women.

### **Human Rights**

This action is aligned with the EU's Action Plan on Human Rights and Democracy 2020-2024<sup>6</sup>. The action will be implemented following the human rights based approach as it intends to decrease energy poverty and grant equal access to basic social services and economic opportunities for all, including for groups in more vulnerable situations, such as older persons, women, persons living with disabilities, among other groups.

In line with the human rights-based approach methodology, the proposed action will abide by the 'do no harm principle' to avoid unintended negative impact in terms of human rights.

As mentioned, the action will take the National Action Plan on Business and Human Rights of the Ministry of Gender, Labour and Social Development as a framework for action.

### **Disability**

As per OECD Disability DAC codes identified in section 1.1, this action is labelled as D0. Although disability has not been identified as a significant target, the action will promote an inclusive approach towards persons with disabilities in its activities, such as participation in community liaison groups and communication.

### **Reduction of inequalities**

Limited access to electricity is driven inequalities between rural and urban communities. Lack of access to electricity prevent rural communities to access to social services (health, education, water and sanitation) in equal terms therefore enlarging the breach between them and their urban pairs. The Action contribute to address this problem.

All of the above will contribute to SDG target 10.2 on empowering and promoting the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

### **Democracy**

Access to energy is a way to support and encourage access to information networks that allows citizens to fully exercise their rights and request better accountability from their Government's representatives. Without access to electricity, citizens are isolated and their capacity to participate in decision making processes is very limited. They are also prevented from taking informed decisions.

### **Conflict sensitivity, peace and resilience**

Access to energy has the potential to open the door for a range of opportunities for growth and economic development, thus being key to securing social stability. Appropriate access to energy contributes to the reduction of regional disparities across the country and cements its integrity. Energy is a stabilising element to prevent or to smooth migration flow patterns that can have potential negative impacts. Therefore, access to energy increases security and the resilience of communities facing external and internal shocks.

### **Disaster Risk Reduction**

Sustainable water management and functional and well operated hydraulic infrastructures are a key factor to contribute to disaster risk reduction, in particular the risk associated with extreme weather events (floods and drought spells). Moreover, without reliable and affordable access to electricity, local and national authorities will be constrained for implementing disaster risk reduction plans and to ensure populations' readiness and awareness.

### **Other considerations if relevant**

Not applicable

<sup>6</sup> [https://www.eas.europa.eu/sites/default/files/eu\\_action\\_plan\\_on\\_human\\_rights\\_and\\_democracy\\_2020-2024.pdf](https://www.eas.europa.eu/sites/default/files/eu_action_plan_on_human_rights_and_democracy_2020-2024.pdf)

### 3.4 Risks and Lessons Learnt

Category	Risks	Likelihood (High/ Medium/ Low)	Impact (High/ Medium/ Low)	Mitigating measures
Macro-economic stability. Debt sustainability.	Risk 1	M	H	Continue promoting improved and transparent public finance management.
Ongoing reform of the electricity sector, including the merging of public companies and extinction of concessions.	Risk 2	H	M	Maintain technical advisory services to MEDM (EU technical assistance support and donor coordination)  Keep active bilateral and multidonors policy dialogue (Active participation in policy task forces).
Lack of capacity to implement projects and to operate power infrastructure.	Risk 3	L	M	Provision of technical assistance to ensure timely and quality implementation and operation and maintenance of power infrastructure
Procurement	Risk 4	L	L	Public tendering to ensure competition. Technical assistance to support the tendering and the evaluation process
<p><b>Lessons Learnt:</b></p> <ul style="list-style-type: none"> <li>• In order to optimise efforts and investments in the energy sector, an overall perspective in both the grid and off-grid spaces is required, and a framing is also needed on energy efficiency. The National Electrification Strategy (draft) and its associated financial plan should guide efforts from different stakeholders to achieve the SDG7.</li> <li>• Institutional capacity needs to be strengthened to ensure strategic planning and programs implementation are made efficiently, coherently and timely to achieve expected results. The electricity regulator is performing well but other key stakeholders such as UEGCL or the MEMD continue to require support and transfer of knowledge to raise their performance levels.</li> <li>• More emphasis on programme and project preparatory phases prior to implementation is crucial for impactful actions. Low quality or absence of appropriate studies can jeopardize financial close or can result on early project termination.</li> </ul>				

### 3.5 The Intervention Logic

The underlying intervention logic for this action is that sustainable, reliable, affordable and clean sources of energy are necessary to catalyse economic development and access to social services that include a gender approach. Roughly, half of the population in Uganda, (+22 million) is lacking access to energy services. Uganda's power sector relies on renewable energy resources, over 90%, and Nalubaale –Kiira hydropower plant (NKHPP) is responsible for 30% of the total installed capacity. In addition, because its strategic location at the outlet of the Lake Victoria, NKHPP controls water discharges from Lake Victoria to the Nile River. Therefore, NKHPP determines power production downstream (Nile Cascade), water availability for other purposes along the Nile river (agriculture, fishing, industries, navigation, water supply) and specially water levels in Lake Victoria, the second largest lake in the world. The hydropower plant is also the one with the cheapest cost of kWh produced in the country, USD cents 1.2, which helps to contain cost reflective tariffs for domestic consumers and commercial/industrial ones. Affordable electricity also comes in hand to support the the most vulnerable households, particularly women, connected to the grid through a subsidized social tariff. However, NKHPP is the oldest power plant in Uganda (commissioned in 1954). As expected, age has taken its toll and refurbishment of turbines and associated equipments is necessary. Forced outage of the Nalubaale units and limited availability of the plant can consequently conduce to black-out or load-sheddings with bad consequences for the country economy, reason why rehabilitation of NKHPP is one of the Government top priorities. Better water management for power production and floods control are consistent activities to reinforce dam safety and to build resilience against climate change. Therefore, rehabilitation of the NKHPP hydropower plant in terms of its water regulation and electricity generation capacities – will improve power reliability and availability to connect more people, secure power production down the cascade, foster investment in not dispatchable renewable energy (mainly solar), support the economy decarbonisation and improve floods control and water resources management in a context of climate change for the benefit of millions of people leaving in the shores of Lake Victoria and along the Nile river. The main investment on the rehabilitation of the generation units will be accompanied on the one hand by an additional effort to digitalize control, operation and monitoring of the power plant and the water resource. And on the other hand, a tailored programme to reinforce the capacities of the power plant operator, UEGCL, to ensure sustainability and efficiency on the operation and maintenance.

### 3.6 Logical Framework Matrix

This indicative logframe constitutes the basis for the monitoring, reporting and evaluation of the intervention. On the basis of this logframe matrix, a more detailed logframe (or several) may be developed at contracting stage. In case baselines and targets are not available for the action, they should be informed for each indicator at signature of the contract(s) linked to this AD, or in the first progress report at the latest. New columns may be added to set intermediary targets (milestones) for the Output and Outcome indicators whenever it is relevant.

- At inception, the first progress report should include the complete logframe (e.g. including baselines/targets).
- Progress reports should provide an updated logframe with current values for each indicator.
- The final report should enclose the logframe with baseline and final values for each indicator.

The indicative logical framework matrix may evolve during the lifetime of the action depending on the different implementation modalities of this action.

The activities, the expected Outputs and related indicators, targets and baselines included in the logframe matrix may be updated during the implementation of the action, no amendment being required to the Financing Decision.

Results	Results chain (e): Main expected results (maximum 10)	Indicators (e): (at least one indicator per expected result)	Baselines <sup>7</sup> (values and years)	Targets (values and years)	Sources of data	Assumptions
<b>Impact</b>	To catalyse sustainable growth and employment in Uganda	1. Proportion of population with access to electricity *, ** (GERF 1.2 SDG 7.1.1) disaggregated at least by sex and persons with disabilities	1. 52% (2023)	1. 100% (2031)	1. ERA/MEMD reports	<i>Not applicable</i>
		2. Unemployment rate, by region, sex, age and persons with disabilities ** (GERF 1.11 SDG 8.5.2)	2. TBD (2023)	2. TBD (2031)	2. Uganda National Development Plan III reports, Ministry of Gender, Labour and Social Development	
		3. Annual consumption of electricity from renewable energy sources (GWh)	3. 4 383 (2021)	3. TBD (2031)	3. ERA/MEMD reports	
		4. Annual consumption per capita (kWh)	5. 215 (2021)	4. 552 (2031)	4. ERA/MEMD reports	
<b>Outcome 1</b>	1 Increased provision of green, reliable and affordable electricity to the grid network	1.1 Average National End User Tariffs, disaggregated by domestic and industrial consumers (USD cents/KWh)	1.1 22 (2023)	1.1 TBD (2031)	1.1 ERA reports	Electricity sector reform is funded, implemented and monitored.
		1.2 Additional electricity production from renewable sources, disaggregated where applicable by urban and rural, on-grid and off-grid (GWh)	1.2 TBD (2023)	1.2 TBD (2031)	1.2 UEGCL reports	
		1.3 Greenhouse Gas (GHG) emissions avoided (tonnes CO <sub>2</sub> eq) with EU support ** (GERF 2.7)	1.3 Zero (0) (2023)	1.3 TBD (2031)	1.3 Power plant operator/ MEMD report	

<sup>7</sup> Baselines and targets will be updated /defined at the signature of the Contribution Agreement with the European Financial Institution implementing the Action

<b>Outcome 2</b>	2 Increased protection of economic/social infrastructures and livelihoods on the Nile River Basin	2.1 Status of implementation of the new operational reservoir/inflow management plan	2.1 Not implemented (2023)	2.1 Implemented (2031)	2.1 UEGCL reports	Integrated water resource management and commitments under the Nile Basin Initiative are respected
		2.2 Number of floods episodes on Lake Victoria and Victoria Nile	2.2 Zero (0) (2023)	2.2 Zero (0) (2031)	2.2 NBI reports	
<b>Output 1 relating to Outcome 1</b>	1.1 Improved power generation capacity from renewable energy at Naalubale-Kiira hydropower plants	1.1.1 Additional renewable energy generation capacity installed (MW) with EU support ** (EU GEF 2.4)	1.1.1 Zero (0) (2023)	1.1.1 One hundred eighty (180) (20)	1.1.1 Owner's engineer reports	UEGCL has adequate financial, technical and human means
<b>Output 1 relating to Outcome 2</b>	2.1 Increased UEGCL capacity to manage electricity production and flood control at Nalubaale-Kiira hydropower plant	2.1.1 Number of professionals/staff trained or coached disaggregated, whenever possible and relevant, by sex and age	2.1.1 Zero (0) (2023)	2.1.1 TBD (2031)	2.1.1 UEGCL reports	
		2.1.2 Number of improved tools and products developed and/or adopted by sector institutions and operators (of which number of those gender-responsive)	2.1.2 Zero (0) (2023)	2.1.2 TBD (2031)	2.1.2 UEGCL reports	
		2.1.3 Frequency of power outages (Index SAIFI)*	2.1.3 TBD (2023)	2.1.3 TBD (2031)	2.1.3. ERA reports	
		2.1.4 Average Length of Power Outages (SAIDI)*	2.1.4 TBD (2023)	2.1.4 TBD (2031)	2.1.4 ERA Reports	

## 4 IMPLEMENTATION ARRANGEMENTS

### 4.1 Financing Agreement

In order to implement this action, it is not envisaged to conclude a financing agreement with the partner country.

### 4.2 Indicative Implementation Period

The indicative operational implementation period of this action, during which the activities described in section 3 will be carried out and the corresponding contracts and agreements implemented, is 96 months from the date of entry into force of the financing agreement.

Extensions of the implementation period may be agreed by the Commission's responsible authorising officer by amending this Financing Decision and the relevant contracts and agreements.

### 4.3 Implementation of the Budget Support Component

Not applicable

### 4.4 Implementation Modalities

The Commission will ensure that the EU appropriate rules and procedures for providing financing to third parties are respected, including review procedures, where appropriate, and compliance of the action with EU restrictive measures<sup>8</sup>.

#### 4.4.1 Contribution to the Africa Investment Platform

This contribution may be implemented under indirect management with the entities, called Lead Finance Institutions, identified in the appendix 2 to this Action Document.

#### 4.4.2 Changes from indirect to direct management mode (and vice versa) due to exceptional circumstances (one alternative second option)

Not applicable

#### 4.4.3 Other actions or expenditure

Not applicable

### 4.5. Scope of geographical eligibility for procurement and grants

The geographical eligibility in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents shall apply.

The Commission's authorising officer responsible may extend the geographical eligibility on the basis of urgency or of unavailability of services in the markets of the countries or territories concerned, or in other duly substantiated cases where application of the eligibility rules would make the realisation of this action impossible or exceedingly difficult (Article 28(10) NDICI-Global Europe Regulation).

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<sup>8</sup> [www.sanctionsmap.eu](http://www.sanctionsmap.eu). Please note that the sanctions map is an IT tool for identifying the sanctions regimes. The source of the sanctions stems from legal acts published in the Official Journal (OJ). In case of discrepancy between the published legal acts and the updates on the website it is the OJ version that prevails.

#### 4.6. Indicative Budget

Indicative Budget components	EU contribution (amount in EUR)		Third-party contribution, in currency identified
	AAP 2023	Top Up in 2024	
<b>Implementation modalities</b> – cf. section 4.4.1			
<b>1. Power generation capacity from renewable energy at Naalubale-Kiira hydropower plant renewable energy is improved</b> composed of Contribution to the Africa Investment Platform - cf section 4.4.1	10 000 000	20 000 000	140 000 000
<b>2. UEGCL capacity to manage electricity production and flood control at Nalubaale-Kiira hydropower plant is increased</b> composed of Contribution to the Africa Investment Platform -cf section 4.4.1			
<b>Evaluation</b> – cf. section 5.2 <b>Audit</b> – cf. section 5.3		0	N.A.
<b>Contingencies</b>		0	N.A.
<b>Totals</b>	10 000 000	20 000 000	140 000 000

#### 4.7 Organisational Set-up and Responsibilities

Funds allocated to the Africa Investment Platform (AIP) will be governed by its established structure. Therefore, the relevant financial institutions leveraging EU grant support will propose the specific governance arrangements and meetings frequency. The latter will be agreed upon discussion at the AIP's Technical Assessment Meeting and Board. However, it can be anticipated that the expected governance structures will include representatives from the relevant ministries, power stakeholders and water authorities.

As part of its prerogative of budget implementation and to safeguard the financial interests of the Union, the Commission may participate in the expected governance structures set up for governing the implementation of the action.

#### 4.8 Pre-conditions

Rehabilitation of Nalubaale-Kiira Hydropower Plant environmental and socio-economic impact assessment study, including the environment and social management plan, and the flood study needs to be completed and its findings endorsed by the technical committee supervising the studies. These studies are already in preparation and expected to be concluded by end of the year (2023). The studies are funded by the Technical Support Programme of the 11<sup>th</sup> EDF Uganda National Indicative Programme.

## 5 PERFORMANCE MEASUREMENT

### 5.1 Monitoring and Reporting

The day-to-day technical and financial monitoring of the implementation of this action will be a continuous process, and part of the implementing partner's responsibilities. To this aim, the implementing partner shall

establish a permanent internal, technical and financial monitoring system for the action and elaborate regular progress reports (not less than annual) and final reports. Every report shall provide an accurate account of implementation of the action, difficulties encountered, changes introduced, as well as the degree of achievement of its results (Outputs and direct Outcomes) as measured by corresponding indicators, using as reference the logframe matrix (for project modality) and the partner's strategy, policy or reform action plan list (for budget support).

The Commission may undertake additional project monitoring visits both through its own staff and through independent consultants recruited directly by the Commission for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission for implementing such reviews).

Roles and responsibilities for data collection, analysis and monitoring:

Baseline indicators and final targets are defined following conclusion of the feasibility study that is already available. Indicators shall be disaggregated at least by sex when appropriate. All monitoring and reporting shall assess how the action is taking into account the human rights based approach, gender equality and rights of persons with disabilities including inclusion and diversity.

More details on the monitoring of the action during implementation will be defined in the project fiche that the lead financial institution will submit to the blending platform for approval. The monitoring system cost will be covered by the total amount of funds allocated to the action.

## 5.2 Evaluation

Having regard to the importance of the action, an ex-post evaluation will be carried out for this action or its components via independent consultants contracted by the Commission.

It will be carried out for accountability and learning purposes at various levels (including for policy revision), taking into account in particular people gaining access to power in the country, industrialisation, electricity tariffs and prevention of floods in the Lake Victoria and Nile River.

The Commission shall inform the implementing partner at least 1 month in advance of the dates envisaged for the evaluation missions. The implementing partner shall collaborate efficiently and effectively with the evaluation experts, and inter alia provide them with all necessary information and documentation, as well as access to the project premises and activities.

The evaluation reports may be shared with the partners and other key stakeholders following the best practice of evaluation dissemination<sup>9</sup>. The implementing partner and the Commission shall analyse the conclusions and recommendations of the evaluations and, where appropriate, apply the necessary adjustments.

All evaluations shall assess to what extent the action is taking into account the human rights-based approach as well as how it contributes to gender equality and women's empowerment and disability inclusion. Expertise on human rights, disability and gender equality will be ensured in the evaluation teams.

Evaluation services may be contracted under a framework contract.

## 5.3 Audit and Verifications

Without prejudice to the obligations applicable to contracts concluded for the implementation of this action, the Commission may, on the basis of a risk assessment, contract independent audit or verification assignments for one or several contracts or agreements.

# 6 STRATEGIC COMMUNICATION AND PUBLIC DIPLOMACY

The 2021-2027 programming cycle will adopt a new approach to pooling, programming and deploying strategic communication and public diplomacy resources.

In line with the 2022 "[Communicating and Raising EU Visibility: Guidance for External Actions](#)", it will remain a contractual obligation for all entities implementing EU-funded external actions to inform the relevant audiences of the Union's support for their work by displaying the EU emblem and a short funding statement as appropriate on all communication materials related to the actions concerned. This obligation will continue to apply equally, regardless of whether the actions concerned are implemented by the Commission, partner

<sup>9</sup> See best [practice of evaluation dissemination](#)

countries, service providers, grant beneficiaries or entrusted or delegated entities such as UN agencies, international financial institutions and agencies of EU member states.

However, action documents for specific sector programmes are in principle no longer required to include a provision for communication and visibility actions promoting the programmes concerned. These resources will instead be consolidated in Cooperation Facilities established by support measure action documents, allowing Delegations to plan and execute multiannual strategic communication and public diplomacy actions with sufficient critical mass to be effective on a national scale.

## Appendix 1 REPORTING IN OPSYS

A Primary Intervention<sup>10</sup> (project/programme) is a coherent set of activities and results structured in a logical framework aiming at delivering development change or progress. Identifying the level of the primary intervention will allow for:

Articulating Actions or Contracts according to an expected chain of results and therefore allowing them to ensure efficient monitoring and reporting of performance;

Differentiating these Actions or Contracts from those that do not produce direct reportable development results, defined as support entities (i.e. audits, evaluations);

Having a complete and exhaustive mapping of all results-bearing Actions and Contracts.

Primary Interventions are identified during the design of each action by the responsible service (Delegation or Headquarters operational Unit).

The level of the Primary Intervention chosen can be modified (directly in OPSYS) and the modification does not constitute an amendment of the action document.

The intervention level for the present Action identifies as (tick one of the 4 following options);

<b>Action level (i.e. Budget Support, blending)</b>		
<input checked="" type="checkbox"/>	Single action	Present action: all contracts in the present action
<b>Group of actions level (i.e. top-up cases, different phases of a single programme)</b>		
<input type="checkbox"/>	Group of actions	Actions reference (CRIS#/OPSYS#):
<b>Contract level</b>		
<input type="checkbox"/>	Single Contract 1	
<input type="checkbox"/>	Single Contract 2	
	(...)	
<b>Group of contracts level (i.e. series of programme estimates, cases in which an Action includes for example four contracts and two of them, a technical assistance contract and a contribution agreement, aim at the same objectives and complement each other)</b>		
<input type="checkbox"/>	Group of contracts 1	

<sup>10</sup> For the purpose of consistency between terms in OPSYS, DG INTPA, DG NEAR and FPI have harmonised 5 key terms, including 'Action' and 'Intervention' where an 'Action' is the content (or part of the content) of a Commission financing Decision and 'Intervention' is a coherent set of activities and results which constitutes an effective level for the operational follow-up by the EC of its operations on the ground. See more on the [concept of intervention](#).

## APPENDIX 2- List of Lead Finance Institutions

- AFD
- KfW
- EIB
- Proparco
- DEG
- COFIDES
- CDP
- FINNFUND
- BIO
- AECID
- FMO

## Appendix 3 – Action’s location



