



## The Sustainable Energy Development Programme: What was achieved during FY 2021/22?

### Overview

The goal of the Sustainable Energy Development (SED) Programme is to meet the energy needs of the country by providing adequate, affordable, clean and reliable energy for sustainable socio-economic growth and development.

The policy brief summarizes the performance of the Sustainable Energy Development Programme during Financial Year (FY) 2021/22, presents the key issues affecting the programme and the recommendations.

### Introduction

The Sustainable Energy Development Programme comprises three sub-programmes namely: Transmission and Distribution; Generation, Renewable Energy Development; Energy Efficiency and Conservation.

The specific objectives of the programme are:

- i. Increase access and utilization of electricity
- ii. Increase the generation capacity of electricity
- iii. Increase adoption and use of clean energy
- iv. Promote utilization of energy-efficient practices and technologies

The programme is implemented by the Ministry of Energy and Mineral Development (MEMD), Uganda Electricity Generation Company Limited (UEGCL), Uganda Electricity Transmission Company Limited (UETCL), Uganda Electricity Distribution Company Limited (UEDCL), and several private distribution companies.

### Financial Performance

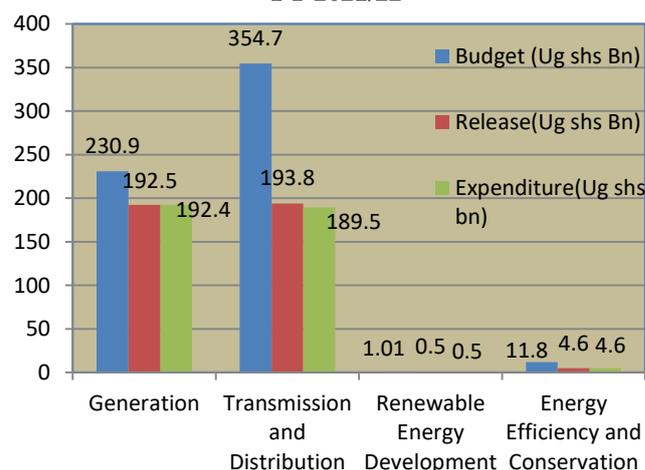
The approved budget for the programme was Ug shs 701.423 (billion) bn. The budget release was Ug shs 484.3bn, of which Ug shs 480.2bn was spent. The budget allocations, releases and expenditures per sub-programme are detailed in figure 1.

Release of Government of Uganda funds, as well as externally funded projects, was low.

### Key Issues

- Delayed project implementation due to slow procurement and Right of Way issues.
- Increased vandalism of infrastructure.
- Low electricity access with 22.1% nationwide and 11% in rural areas.
- Poor prioritization in resource allocation in some sub-programmes.

Figure 1: Budget Performance of SED Programme FY 2021/22



Source: IFMS and PBS

### Physical Performance

#### 1. Transmission and Distribution Sub-programme

The sub-programme performance was fair at 65.1% in FY2021/22 due to Right of Way (RoW) bottlenecks and procurement delays. The planned interventions under this sub-programme for FY 2021/22 were: expanding the transmission network; expansion and rehabilitation of the distribution network; as well as reducing the end-user tariffs.

#### Transmission

During FY 2021/22, 285.6km of the transmission line was added to the grid against a planned target of 500km increasing the network from 3,100km to 3,385.56km. Highlights during the FY included the completion of



works on the Karuma-Kawanda 400kV and Karuma-Olwiyo 132kV transmission lines. However, the works on other key transmission projects were still under implementation with delays notably: The Lira-Gulu-Nebbi-Arua Transmission Project, Gulu-Agago Transmission Project, Mutundwe-Entebbe Transmission Project, Mirama-Kabale Transmission Project, and the Karuma-Lira Transmission Line.



**Ongoing works at the 132kV Arua Substation**

Implementation delays in the construction of grid projects were mainly attributed to the difficulties in the acquisition of the line corridors, and recurring incidents of vandalism of the towers. The delayed implementation is causing the persistence of deemed energy costs due to generation capacity that cannot be evacuated onto the grid. The deemed energy costs amounted to Ug shs 87.7bn in FY2020/21 and Ug shs 87.5bn in FY2021/22.

**Distribution**

The implementation of several rural electrification projects continued and 3,500km of medium voltage distribution (11kV and 33kV) and 4,000km of low voltage distribution lines were completed. The grid electricity grid access increased to 19% although this fell short of the planned target of 35%. There was delayed completion of most rural grid extension projects funded by the Kuwait Fund, World Bank and GoU due to wayleave issues and material delivery delays.



**Completed grid network at Bikirungu TC, Rukungiri District under the ERT III Project**

**Free electricity connections**

Under the Free Connections Policy, the Government targeted to connect 300,000 consumers to the grid but only a total of 92,767 connections were made, with most connections made in the UMEME service areas (Table 1).

**Table 1: Breakdown of free electricity connections by the service provider as of 30<sup>th</sup> June 2021**

Service Provider	Source of Funding				Grand Total
	AfDB	GoU	IDB	KfW	
UMEME	76,730	-	-	5,702	82,432
UEDCL	-	5,716	251	-	5,967
ENGIE EQUATORIAL	-	3,022	-	-	3,022
KIL	-	551	-	-	551
KRECS	-	272	-	-	272
PACMECS	-	67	203	-	270
KIS	-	253	-	-	253
<b>Grand Total</b>	<b>76,730</b>	<b>9,881</b>	<b>454</b>	<b>5,702</b>	<b>92,767</b>

*Source: MEMD*

The performance of this initiative was disrupted by inadequate funding which led to its suspension therefore connections only resumed in the second quarter of FY2021/22.

**2. Generation Sub-programme**

The performance of the Generation Sub-programme was poor at 43.1%. The main planned outputs under the sub-programme were: the completion of works at



Karuma Hydro Power Project (HPP), the construction of Nyagak III HPP, the completion of the defects liability for Isimba HPP, and the construction of Muzizi HPP. The planned outcome during the FY2021/22 was: to increase the generation capacity by 700MW. However, only 75MW of generation capacity was added to the grid.

There was delayed completion of Karuma HPP, with works at 99.6% yet completion was expected by July 2022. The delays were a result of the COVID-19 pandemic, which affected the logistics for some of the equipment, and several defects/non-conformities that were being completed. The project continued to experience contract management challenges with several unresolved disputes between the contractor and the employer.



**Ongoing civil works on the penstock at Nyagak III HPP in Zombo District**

Works at Nyagak III progressed well and 71% of the planned works were completed, however, procurement of works for Muzizi was not concluded.

The previously commissioned Isimba HPP was in operation by UEGCL under the defects liability period. However, the contractor had only addressed 78% of the 690 defects and yet the defects liability period was supposed to end on September 30<sup>th</sup> 2022. The other planned large hydropower projects (Kiba and Ayago) had their feasibility studies completed.

### **3. Renewable Energy Development Sub-programme**

The sub-programme performance was fair at 66.1%. During FY 2021/22, the measured consumption of clean energy was 35% against a planned target of 40%. The planned interventions under the sub-programme in FY2021/22 included: the construction of renewable energy mini-grids; promotion of new and renewable energy solutions and building local technical capacity renewable solutions; promote uptake of alternative and efficient cooking techniques.

The 25 solar mini-grids with funding from GIZ and European Union were completed in Lamwo, Northern Uganda. The mini-grids were under operation and 50% of the planned connections had been attained. The procurement for the 20 mini-grids in the districts of Isingiro and Rakai was completed and works were due to commence in FY2022/23.



**Completed solar mini-grid at Palabek Ogiri in Lamwo District**

There were continued efforts to undertake training and capacity building in renewable energy systems with training undertaken for 20 engineers and technicians on the operation and maintenance of the solar plants. Also, training was undertaken for 8 artisans in the construction of bio-latrines, and 15 artisans in the construction of highly efficient energy stoves in schools.

### **4. Energy Efficiency and Conservation Sub-programme**

The sub-programme performance was fair at 64.2%. The planned interventions under the sub-programme were: to promote the uptake of alternative and



efficient cooking technologies; promote the use of energy-efficient equipment for both industrial and residential consumers, and introduce minimum performance standards for selected electrical appliances. The planned outcomes were: reduced energy losses on the grid; a percentage of audited firms implementing energy efficiency measures.

The grid energy losses reduced from 18% in FY2020/21 to 17% in FY2021/22. The percentage of audited firms implementing energy efficiency measures was 80% compared to a target of 50%.

Preliminary energy audits were conducted for 10 large energy consumers. Full energy audits were also conducted for 13 small and medium enterprises (SMEs) in northern and eastern Uganda. Dissemination of energy audit findings for National Water and Sewerage Corporation (NWSC), Jesa Farm Dairy Limited, and Kampala Cement Company Limited (KCCL) was undertaken.

To promote efficient and alternative energy sources for cooking, the MEMD partnered with three oil companies and allocated 938 promotional LPG cylinder kits for distribution by TOTAL Energies, VIVO Energy and STABEX at the end of the FY. The procurement of other 5,091 LPG cylinders was ongoing and distribution of the LPG cylinders was planned to commence in FY2022/23.

Six new standards covering several areas in energy management and energy efficiency among energy consumers were developed in conjunction with UNBS.

## Challenges

- Increased vandalism of transmission and distribution infrastructure with losses totalling Ug shs 260bn recorded in the past two years.
- Power projects continue to experience delayed implementation due to poor planning manifested as slow procurement, poor land acquisition and contract management.
- Electricity connection rates remain low especially in rural areas due to the high connection costs and in some instances lack of access to the grid.

- Low budget allocations for some of the interventions related to renewable energy and energy efficiency to have an impact.

## Recommendations

- Government should regulate the trade in metal scrap materials to eliminate the market for vandalized materials.
- The MEMD should engage the Judiciary to explore the fast-tracking of land compensation court cases that are holding up key projects to avoid stalling ongoing works.
- Funding for the Free Connections Policy should be ring-fenced and sustained so that further progress in the electrification of the rural population can continue.
- The MEMD should allocate more funds for renewable energy and energy efficiency interventions so that they can be scaled up for them to have an impact.

## References

1. Budget Monitoring and Accountability Unit: Annual Monitoring Report for Sustainable Energy Development Programme FY 2021/22.
2. Uganda Electricity Transmission Company Limited: Q1, Q2, Q3 and Q4 Reports FY2021/22.
3. Uganda Electricity Generation Company Limited Reports: Q1, Q2, Q3 and Q4 Reports FY2021/22.
4. Ministry of Energy and Mineral Development: Q1, Q2, Q3 and Q4 Reports.

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