
Foreword

This programme contributes to the NDP III objective of enhancing value addition in key growth areas as well as consolidating and increasing the stock and quality of productive infrastructure. The goal of the programme is to meet the energy needs of the country by providing adequate, affordable, clean and reliable energy for socio-economic growth and development.

In order to achieve the goal, the following objectives are being implemented:

1. Increase access and utilization of electricity.
2. Increase generation capacity of electricity.
3. Increase adoption and use of clean energy.
4. Promote utilization of energy efficient practices and technologies.

By the end of the NDP III in 2025, this programme is envisaged to achieve universal access to energy by all Ugandans.

The NDPIII defines the broad direction for the country and sets key interventions and targets for sustainable socioeconomic transformation of Uganda while promoting a coordinated approach to achievement of the development objectives.

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Permanent Secretary

Abbreviations and Acronyms

ACRONYM	ACRONYM NAME
DPI	Development Plan Implementation
GOU	Government of Uganda
KCCA	Kampala Capital City Authority
LC	Leadership Committee
LG	Local Government
LGFC	Local Government Finance Commission
MLHUD	Ministry of Land, Housing and Urban Development
MoFPED	Ministry of Finance, Planning and Economic Development
MoGLS	Ministry of Gender, Labour and Social Development
MoICT	Ministry of Information & Communication Technology
MoLG	Ministry of Local Government
MoPS	Ministry of Public Service
MoSTI	Ministry of Science Technology and Innovation
NDP	National Development Plan
NIRA	National Identification Registration Authority
NITA-U	National Information Technology Authority
NPA	National Planning Authority
OAG	Office of the Auditor General
OP	Office of the President
OPM	Office of the Prime Minister
PIAP	Programme Implementation Action Plan
PPDA	Public Procurement and Disposal Authority
PSD	Private Sector Development
PWG	Programme Working Group
TWG	Technical Working Group
UBOS	Uganda Bureau of Statistics
URA	Uganda Revenue Authority
URSB	Uganda Registration Services Bureau

P1: PROGRAMME OVERVIEW**Snapshot of Medium Term Budget Allocations****Table P1.1 Overview of Programme Expenditure and Medium Term Allocations (Ush Billion)**

<i>Billion Uganda Shillings</i>		2022/23	MTEF Budget Projections			
		Proposed Budget	2023/24	2024/25	2025/26	2026/27
Recurrent	Wage	22.174	22.174	22.174	22.174	22.174
	NonWage	26.298	26.298	26.298	26.298	26.298
Dev't.	GoU	315.918	315.918	315.918	315.918	315.918
	ExtFin	743.442	1,135.125	972.699	416.491	0.000
GoU Total		364.390	364.390	364.390	364.390	364.390
Total GoU+Ext Fin (MTEF)		1,107.833	1,499.515	1,337.089	780.881	364.390
A.I.A		0.000	0.000	0.000	0.000	0.000
Grand Total		1,107.833	1,499.515	1,337.089	780.881	364.390

Programme Strategy and linkage to the National Development Plan

The availability of sustainable energy services, which is reliable, affordable and clean, is critical for economic growth, poverty reduction, as well as the social and cultural transformation of society.

The goal of the programme is therefore, to increase access and consumption of clean energy.

This programme seeks to increase access to and consumption of clean energy.

Key expected results include:

1. Increase in primary energy consumption
2. Increase in the proportion of population accessing electricity
3. Increase per capita electricity consumption
4. Reduction in the share of biomass energy used for cooking
5. Increase the share of clean energy used for cooking
6. Increase in transmission capacity
7. Enhanced grid reliability and
8. Increase national LPG uptake.

P2: Highlights Of Programme Projected Performance**Table P2.1 Programme Outcomes Indicators**

Programme Outcome	Increased electricity access					
Programme Objectives contributed to by the Intermediate Outcome						
Increase access and utilization of electricity						
Programme Outcome Indicators	Performance Targets					
	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
Grid reliability (%)	2018/19	80	95%	98	98	98
Grid reliability (%)	2018-2019	80	95%	98	98	98
Percentage of households with access to electricity	2018_19	60%	57%	65%	70%	80%
Primary energy consumption (million tonnes of oil equivalent)	2018_19	14	15	18	19	21
Transmission capacity of High voltage[1] transmission lines (km)	2018_19	3100	4500	4550	4600	4700

Programme Outcome	Increased electricity consumption					
Programme Objectives contributed to by the Intermediate Outcome						
Increase access and utilization of electricity						
	Performance Targets					
Programme Outcome Indicators	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
Electricity consumption per capita (kwh per capita)	2017_18	78	100	150	180	200
Unit cost of power (USD) - cents - Extra-large	2017_18	7	5	5	3	3
Unit cost of power (USD) - cents - Large industrial consumers	2017_18	7	5	5	3	3
Unit cost of power (USD) - cents - Medium industrial consumers	2017_18	12	8	8	7	5
Programme Outcome	Increased consumption of alternative clean cooking energy					
Programme Objectives contributed to by the Intermediate Outcome						
Increase adoption and use of clean energy						
	Performance Targets					
Programme Outcome Indicators	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
% of households and institutions cooking with: (LPG, Biogas, Solar thermal applications, etc.)	2017_18	75	80%	70	60	50
Share of biomass Energy used for cooking (%)	2017_18	85	80%	70	60	50
Share of clean energy used for cooking	2017_18	15	30	35	45	50
Programme Outcome	Increased energy generation capacity					
Programme Objectives contributed to by the Intermediate Outcome						
Increase electricity generation capacity						
	Performance Targets					
Programme Outcome Indicators	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
Energy generation capacity (MW)	2017_18	980	600	100	200	300
Programme Outcome	Efficient energy utilization					
Programme Objectives contributed to by the Intermediate Outcome						
Promote utilization of energy efficient practices and technologies						
	Performance Targets					
Programme Outcome Indicators	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
% of energy wasted (Transmission and Distribution)	2017_18	15	16%	14	12	10
Energy losses (%): Transmission and Distribution	2017_18	3.8	3.6%	3.4	3.2	3.0
MW of energy saved	2017_18	20	33	40	45	50
MW of energy saved	2018_19	6.4	9	11	13	16

Table P2.2: Intermediate Outcomes Indicators

Sub-Programme Name:	Generation					
Intermediate Outcome Indicators:	Increased electricity generation capacity					
	Performance Targets					
Indicators	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
Electricity generation capacity (MW)	2018-2019	984	1990	2493.6	2996.8	3500

Sub-Programme Name:	Transmission and Distribution					
Intermediate Outcome Indicators:	Increased electricity access					
Indicators	Performance Targets					
	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
Primary energy consumption (million tonnes of oil equivalent)	2018-2019	15.2	17	18	19	21.74
Transmission capacity of High voltage[3] transmission lines (km)	2018-2019	2354	3000	3400	3800	4354
Transmission capacity of High voltage[3] transmission lines (km)	2018-2019	2354	3000	3400	3800	4354
Grid reliability (%)	2018-2019	80	%	98	98	98
Percentage of households with access to electricity	2018-2019	50	%	60	65	80
Intermediate Outcome Indicators:	Reduction in Electricity Cost					
Indicators	Performance Targets					
	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
Unit cost of power (USD)- cents -Medium industrial consumers	2018_19	10	8	7	6	5
Unit cost of power (USD)- cents-Extra-large	2018_19	7	5	5	3	3
Unit cost of power (USD)- cents-Large industrial consumers	2018_19	7	5	5	3	3
Sub-Programme Name:	Renewable Energy Development					
Intermediate Outcome Indicators:	Increased consumption of alternative clean cooking energy					
Indicators	Performance Targets					
	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
% of households and institutions cooking with: (LPG, Biogas, Solar thermal applications, etc.)	2018-2019	0.8	1%	6	8	10
Share of biomass Energy used for cooking (%)	2018-2019	85	85%	70	60	50
Share of clean energy used for cooking	2018-2019	15	15%	30	40	50
Intermediate Outcome Indicators:	Increased Electricity access in rural and					
Indicators	Performance Targets					
	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
No of Sub counties electrified	2018_19	110	55	150	200	120
Sub-Programme Name:	Energy Efficiency					
Intermediate Outcome Indicators:	Efficient energy utilization					
Indicators	Performance Targets					
	Base Year	Base Line	2022/23	2023/24	2024/25	2025/26
MW of energy saved	2018-2019	6.4	9	11	13	16
Energy losses (%): Transmission and Distribution	2018-2019	19.6	16%	14.26	13.97	12.6

P3: Medium Term Budget Allocations by Sub-Programme and Vote

Table P3.1: Proposed Budget Allocations and Medium Term Projections by Sub-Programme

<i>Billion Uganda Shillings</i>	2022/23	Medium Term Projections			
	Proposed Budget	2023/24	2024/25	2025/26	2026/27
01 Generation	198.758	198.758	198.758	198.758	69.548
02 Transmission and Distribution	906.654	1,298.337	1,135.911	579.703	292.422
03 Renewable Energy Development	1.010	1.010	1.010	1.010	1.010
04 Energy Efficiency	1.410	1.410	1.410	1.410	1.410
Total for the Programme	1,107.833	1,499.515	1,337.089	780.881	364.390

Table P3.2: Proposed Budget Allocations and Medium Term Projections by Vote

<i>Billion Uganda Shillings</i>	2022/23	Medium Term Projections			
	Proposed Budget	2023/24	2024/25	2025/26	2026/27
017 Ministry of Energy and Minerals	1,107.833	1,499.515	1,337.089	780.881	364.390
Total for the Programme	1,107.833	1,499.515	1,337.089	780.881	364.390

P4: PROGRAMME PRIORITIES IN LINE WITH INTERVENTIONS FOR FY2022/23

Programme Priorities FY2022/23	NDP III Programme Intervention aligned to
Electric transport solutions promoted	Adopt the use of electric bicycles and tricycles transport solutions e.g. solar powered motor cycles, bicycles, and tricycles
Conduct customized trainings to build capacity for renewable energy solutions	Build local technical capacity in renewable energy solutions
finalize studies to develop 200 off-grid min-grids based on renewable energies	Construct 200 off-grid min-grids based on renewable energies
Undertake detailed Feasibility studies for Uganda -DRC power Interconnector, Uganda - South Sudan 400kV Power Interconnector and Uganda - Tanzania 400kV power interconnector	Construct transmission lines to the DRC Congo, Northern Tanzania and Southern Sudan
Net metering framework developed	Develop a framework for net metering
- Undertake Awareness on quality of service - Develop regulations to enforce quality of service	Develop and enforce standards on quality of service in the energy industry
Develop ICT solution to enable efficient and effective cascade Management of the dams along the Nile	Develop ICT solutions to enable efficient and effective cascade Management of the dams along the Nile
Muzizi HPP, Nyagak and biogas cogenerations plants constructed	Develop medium and small power plants (Muzizi HPP, Nyagak, biogas cogeneration).
Construct 10,000 km of medium voltage networks and 15,000 km of low voltage network	Develop renewable off-grid energy solutions (Construct 10,000 km of medium voltage networks and 15,000 km of low voltage network).
Review power tariffs	Establish mechanisms to reduce the end-user tariffs.
Implementation of Kampala Metropolitan Project Upgrade of Kabulasoke switching station to 80MW and Nkonge substation to 80 MW Power Transformers Project to reinforce Substations	Expand and rehabilitate the distribution network including rural and hard-to-reach areas (grid expansion and densification, last mile connections, evacuation of small generation plants, quality of supply projects)

Programme Priorities FY2022/23	NDP III Programme Intervention aligned to
Construction of Wobulenzi Kapeeka T Line Construction of Kapeeka Kaweeta Nakasongola T-Line Completion of construction of the Namanve South Luzira T Line 43km 515MVA Complete construction of Kawanda Kasana T line 45km Kasana SS 20MVA Electrification of Industrial Parks Phase III 118.5km Jinja Industrial Park 240MVA Njeru 160MVA Masese 160MVA Kasese Industrial Park 160MVA Ishaka Industrial Park 160MVA	Expand the transmission network to key growth economic zones (industrial and science parks, mining areas and free zones, etc.)
- Undertake MEPS studies for five appliances - Conduct stakeholder consultations to review existing MEPS - Validate and update MEPS - Disseminate MEPS - Conduct surveillance testing for conformity of lighting appliances on Ugandan market	Introduce Minimum Performance Standards for selected electrical appliances.
Develop infrastructure for LPG and Natural Gas Transportation and Storage	Invest in LPG infrastructure
- Conduct Energy Audits - Integrate Energy Manage System - Develop policy framework to promote electric mobility	Promote the use of energy efficient equipment for both industrial and residential consumers;
- Feasibility studies for electric cooking in the country - Testing and Certification of cooking appliances with respect to efficient utilization of energy - Promotion of alternative cooking fuels to substitute firewood and charcoal	Promote uptake of alternative and efficient cooking technologies including rural areas (electric cooking, domestic and institutional biogas and LPG);
Increased deployment of new renewable energy solutions	Promote use of new renewable energy solutions (solar water heating, solar drying, solar cookers, wind water pumping solutions, solar water pumping solutions)
Rehabilitated transmission network Expanded distribution network	Rehabilitate the existing transmission network;
- Electricity Act, 1999 Amended - Atomic Energy Act, 2008 Amended - Energy Efficiency and Conservation Legislation developed - Geothermal legislation developed	Review the existing Acts (Electricity Act, 1999 and Atomic Energy Act, 2008) and develop legislation for geothermal to promote exploration, development and utilization of Uganda's geothermal resources for social and economic transformation and energy efficiency.
Approvals for construction of a nuclear power plant finalized	Seek approvals for construction of a nuclear power generation plant
Large generation plants initial activities finalized EIA recommendations implemented Construction of 72km Gulu-Agago Transmission line to evacuate Agago-Achwa HPP	Undertake preliminary development of large generation plants (construction for Ayago 840 MW, feasibility for Kiba 330 MW and Oriang 392 MW)

P5: GENDER AND EQUITY ISSUES AND INTERVENTIONS FOR FY2022/23

Key issues

1. Over reliance on biomass sources in the energy mix
2. Constrained electricity transmission and distribution infrastructure
3. Limited access to off-grid solutions
4. Limited productive use of energy
5. Long lead time of energy projects
6. Low levels of energy efficiency
7. Uncoordinated intra and inter sectoral planning.

Interventions

1. Increase primary energy consumption from 15.20 million tonnes of oil equivalent to 21.74 million tonnes by 2025
2. Increase proportion of the population with access to electricity from 50% in FY2010/20 to 80%.

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- ~~2. Increase proportion of the population with access to electricity from 56% in FY2017/20 to 66%~~
 3. Increase per capita electricity consumption from 100kWh in FY2018/19 to 578kWh
 4. Reduce share of biomass energy used for cooking from 86 percent in FY2018/19 to 50 percent
 5. Increase the share of clean energy used for cooking from 15 percent in FY2018/19 to 50 percent
 6. Increase Transmission capacity from 2354km in 2018/19 to 4354km of High voltage transmission lines
 7. Increase grid reliability to 90 percent
 8. Increase in national LPG uptake from the current 1% to 15% percent on the energy balance.