



An aerial view of the multi-billion dollar Bujagali hydropower dam. The Government is promoting the adoption of such and other renewable energy technologies

Promoting access to clean energy

By Owen Wagabaza

Uganda is endowed with numerous natural resources, notably abundant biomass, water, solar, peat, geothermal, wind, oil mineral and gas resources, with a potential of up to 5300MW. However, of all these, water and biomass are the most significantly utilized. These two resources contribute a great deal to meeting the energy demands of Uganda's population.

The uneven use of available resources has led to insufficient supply of energy, a situation that is aggravated by consumers' mostly inefficient use of the little energy that is available. It has further placed the country among the lowest consumers of modern and clean energy, both in sub-Saharan Africa and the world.

In 2007, the government of Uganda came up with the renewable energy policy to among others, diversify the energy supply sources and mechanisms. This was aimed at promoting energy security and independence.

The policy was also based on the need to address the challenges in the renewable energy sector, as well

as threats posed by the increasing energy prices, environmental degradation, climate change, as well as government's commitment to poverty and gender responsive energy actions.

Clean energy

This year's theme for the Energy Week is; *Access to clean energy, the bridge to sustainable development*. According to energy minister Irene Muloni, the theme was chosen in relation to Goal Seven of the Sustainable Development Goals (SDGs) which calls for universal access to affordable and clean energy by 2030.

"Energy is vital for economic development and that is why the Government has promised it in its development plan. All key sectors of the economy, notably, transport, industry, commerce, education, health, agriculture, Information Communication Technology (ICT), tourism, mining, and all other sectors need adequate reliable and affordable energy for them to function effectively," Muloni says.

The minister adds that it is on this basis that the government is committed to expanding the renewable energy generation capacity, and as of now, several renewable energy projects totaling over 125 MW are



The government is increasing using solar to power health centres in rural areas

under construction while others are being studied.

Energy access

"Our focus on increasing access to clean, reliable and affordable energy to the population is guided by the Rural Electrification Strategy and Plan 2013-2022 that aims at facilitating accelerated access to modern energy services for the rural

communities," she says.

The energy minister says that renewable energy generation projects totaling up to 170MW are to be developed under the GET-FiT programme, which is a climate resilient, low carbon development programme. The Government is also promoting the adoption of other renewable energy technologies such as biogas

systems, especially in schools, for cooking applications.

Under the Energy for Rural Transformation the government has adopted solar for lighting health centres and schools, water heating and water pumping as well as wind energy technology, which is currently under study in the Karamoja region. Geothermal energy, which is estimated to have

a potential of 450MW, is also under study. According to Moses Tiberinda, the operations manager of Energy for People, an organization that is into renewable energy promotion in Uganda, high upfront costs of investment in renewable energy technologies, which result in many of them not being cost-competitive, is hampering the development of the sector. This, according to Tiberinda, has caused products to carry higher prices, causing the public to shun them.

Inadequate legal and institutional framework is also a challenge. Tiberinda explains that there has for a long time been lack of a standard procedure and legal instruments for new renewable energy investments, and this is affecting the sector.

Also, lack of appropriate financing mechanisms to facilitate the development and promotion of Renewable Energy Technologies (RETs) remains a threat to the sector. Because commercial banks currently are not providing long-term lending required for renewable energy technologies, and they still have high upfront costs, consumers find them unaffordable, yet mechanisms for consumer financing to

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Renewable energy way to go

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address this problem are still inadequate. There is limited awareness of the importance of renewable energy among the stakeholders, and lack of recognition of women as key participants in technology use and innovations. Women are big decision makers in this sector, yet they are not being given the necessary sector.

Another challenge that needs immediate redress is the lack of standards and quality assurance. Moses Ssentamu from Solar World Limited, a solar products marketing company, says there is lack of adequate standards and mechanisms to monitor and ensure quality of RETs.

"There are different solar technologies on the market and the general public is not aware of their effectiveness, some are fake and others genuine, the government needs to come in and address this challenge," he says.

There has been limited stakeholder participation in the planning and implementation of renewable energy projects and this has led to poor sustainability of investments. Ssentamu says there is need for holistic programme development and management involving the various bodies in the power sector.

Throughout the world, there are concerted efforts to make renewable

ANOTHER CHALLENGE THAT NEEDS IMMEDIATE REDRESS IS THE LACK OF STANDARDS AND QUALITY ASSURANCE

energy replace non-renewable energy sources in the future. The driving forces for investments in renewable energy are the ever-increasing cost of fossil fuels, which makes them too expensive for developing countries.

But also, the future for fossil fuels is uncertain. Experts show that if the world continues to consume energy at the current rate, the nonrenewable sources will be exhausted in the near future.

The oil fields already discovered hold over 1 billion barrels of oil. If no more oil were to be found and we carried on using oil at existing rates, then the reserves would last for less than 40 years.



The electro-thermal plant in Tororo



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UGANDA ELECTRICITY TRANSMISSION COMPANY LTD

ENERGY EFFICIENCY WEEK MESSAGE

The Uganda Electricity Transmission Company Limited (UETCL) is a **public limited liability company with a mandate to Buy and Sale power in bulk and operates the High Voltage Transmission Grid (HVTG) above 33kV.**

UETCL is implementing several projects that will provide a robust transmission grid to evacuate power from proposed generation sites, extend the national grid to facilitate rural electrification, upgrade the system to attain efficiency and promote interconnection with neighboring countries for security of power supply.

When completed the grid will ensure power system stability and enhance quality, reliable and efficient power supply that will positively contribute to sustainable development of Uganda and the East African region.

MANAGEMENT



UEDCL

Uganda Electricity Distribution Company Limited

UEDCL ENERGY WEEK SUPPLEMENT

Uganda Electricity Distribution Company Limited is proud to be at the fore front of power distribution to rural communities in various regions of the country. We manage the power distribution network in areas that have just been connected to the national grid. Our expertise and constant investment in power retailing has transformed these service territories into commercially viable units.

UEDCL has gained good experience in managing rural distribution networks and was recently nominated by the Rural Electrification Agency (REA) and the Electricity Regulatory Authority (ERA) to take over electricity distribution business in areas where a major private operator pulled out

Our NEW SMART pre-paid metering system now in operation in most of our service territories is the most modern in the country and the region as a whole giving power consumers great flexibility in managing their

power accounts. Our partnership with major telecom companies on e-payment for energy has given the rural energy consumers great ease in managing their energy consumption and payment.

UEDCL pole plant has sustained the national grid for over half a century and still continues to play a leading role in supporting energy transmission and distribution countrywide by supplying quality treated poles to the various implementing agencies and contractors.



UEDCL SERVICE TERRITORIES COUNTRYWIDE

NORTH EAST SERVICE TERRITORY

Katakwi
Bukwo
Moroto
Nakapiripirit

CENTRAL NORTH SERVICE TERRITORY

Aloi
Dokolo
Amolatar

MID WEST SERVICE TERRITORY

Lwemiyaga
Kazo

NORTH NORTH WEST SERVICE TERRITORY

Kamini
Gulu

Otwal

Adjumani
Moyo
Pabbo

EAST SERVICE TERRITORY

Kasambira
Namayingo
Mayuge

NORTH WEST SERVICE TERRITORY

Kiganda
Biiso
Kyenjojo
Igaya
Kamwenge
Kagadi
Karuguz

SOUTH WEST SERVICE TERRITORY

Muhanga
Kihhi
Muko
Kanungu
Kisoro

SOUTH SOUTH SERVICE TERRITORY

Nyendo
Kikagati
Lumbugu
Sanje
Rugaaga
Kitwe