

Power rises from 150 to 1,200MW

BY BENON OJIMBO

Uganda's electricity journey has seen the country grow from a single generation plant established in the 1950s to 40 plants.

It has grown the generation capacity from 150MW in 1950s to over 1,200MW in 2020.

NO NATIONAL GRID

Before 1949, there was no national generational grid and neither was there an electricity generation plant.

Fortunes changed when the Uganda Electricity Board (UEB), an entity that would later manage the country's electricity subsector, was established in 1948.

A year later Owen Falls dam, later renamed Nalubaale, was built and commissioned in 1954, with only four of the plant's 10 turbines running at the time.

"This was enough to power Uganda and some parts of Kenya. At the time, there had been earlier generation by specialised generators like the one that was at Lugogo serving Kampala," Simon Kasyate, the corporate and communications manager at the Uganda Electricity Generation Company Limited (UEGCL), says.

The plant's other generation units were subsequently commissioned over a 10-year period until 1964.

MORE DEMAND FOR POWER

Years later, demand for electricity grew and outstripped supply, which prompted the Government to revamp the dam.

Initially designed with ten units each with a capacity of 15MW, the plant was refurbished in the 1980s. The capacity of each unit was stepped up to 18MW raising its capacity to 180MW.

Government also developed Kira Hydropower Plant with a 200mw capacity.

However, between 1970s and 1986, political uncertainty in the country did not spare the electricity subsector and this resulted in economic crisis.

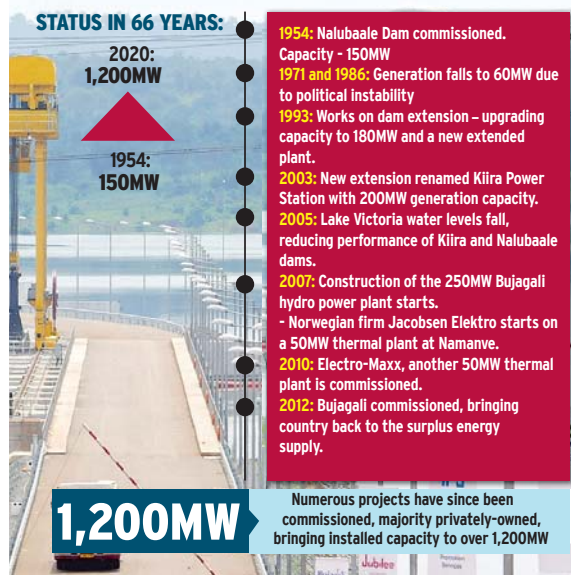
During that period, electricity production had fallen from 150MW in 1963 to 60MW by 1986 and the economy was characterised by huge energy deficits and a struggling industrial sector.

REFORMS

According to a research paper titled Uganda's Electricity Sector Reforms and Institutional Restructuring by the Economic Policy Research Centre, a number of developing countries, including Uganda, undertook electricity sector reforms during the 1990s.

The major aim of the reforms

A timeline of power generation



An aerial view Isimba hydro power plant in Kayunga district

CONSUMPTION IS KEY

The finance ministry's permanent secretary Keith Muhakanizi who is also the secretary to the treasury, said the country must now reserve money to pay for generated but unconsumed power for the next five years.

The reserved financing is also meant to cover short-term financial obligations accruing from the loans taken to build the projects, such as debt servicing, return on investment, taxes, and insurance.

These obligations also mean that there is likely to be an upward trajectory in the sector revenue requirements that have to be met by the consumers through the end-user tariff and this is likely to result in hike of the tariffs as they seek to collect more and meet the financial demands of the sector.

Consumers are charged a tariff that nearly reflects the financial requirements of different entities operating in the sector, including from generation, transmission and distribution segments.

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40

Uganda's electricity has grown from a single plant in the 1950s to 40

ushered in by the reforms that has earned the confidence of private investors, as well as government's deliberate investment in the segment.

There have been a number of privately-owned, large and small generation plants of different technologies, such as solar, hydro and thermal; spring up across the country.

Notable among these are Bujagali, Kabulasoke solar plant in Gomba district, Nkusi in Hoima district, Siti 1 and Siti 2 projects in Bukwo district, Muvumbe in Kabale district and Achwa 2 in Pader district.

Generation capacity is further expected to increase to close to 2,000MW with the commissioning of 600MW Karuma and other small power projects that are currently under development.

UEGCL'S JOURNEY

At the time of formation, Kasyate says UEGCL inherited the then generation assets of Nalubaale and Kira plants that were later handed to a private player to operate and maintain on concession basis.

"At the time, the company was suffering from low internal capacity, both in finance and human resources, caused by brain drain that had seen the best of our staff seek greener pastures elsewhere. As a result, government concessioned UEGCL's assets to Eskom, a South

African company for operation and maintenance on a 20-year plan," he explains.

This meant that UEGCL's role was relegated to monitoring how Eskom operates. It also maintains the plant in line with our concession.

With the company developed, a new thinking on what we could do as a company, beyond concession monitoring and they 'began to think hard and fast on how to improve our human resources by way of recruiting and training'.

"This was the time when government made a decision not rely on the private sector to develop the country's flagship projects of Karuma and Isimba, owing to the lessons learnt when the private sector was relied on during the energy crisis.

"UEGCL went about what it takes to be a proper utility in operation and maintenance through training and exposing our human resource to similar plants around the world. Almost a year of operating Isimba, we have not disappointed," Kasyate said.

He also added that they have identified other mini hydro projects like the 48MW Muzizi, 6MW Nyagak 3 project in West Nile and considering prospects from other sources of clean energy beyond hydro, such as geothermal, wind and solar energy projects.

long as the country was plunged into an energy crisis following the fall of water levels from Lake Victoria.

This crisis pushed government into seeking the intervention of the private sector and this saw development of 250MW Bujagali hydropower plant that was commissioned in 2012.

INSTALLED CAPACITY HAS INCREASED

Uganda's installed generation capacity has since grown to about 1,200MW by the end of 2019, according to latest information from the Electricity Regulatory Authority.

This has been achieved with the aid of a 'predictable and transparent' investment climate

was to improve quality of service, improve connectivity and reliability, reduce losses, attract private capital investment into the sector and thus enhance overall sector efficiency.

The paper states that the electricity reforms in Uganda were initiated in 1997, with the formulation of a comprehensive strategic plan for transforming the electricity sector into a financially viable industry, with the aim of enabling efficient electricity supply at reasonable prices.

In 1999, the strategic plan was reviewed to address the key problems in the sector, such as like UEB's poor financial and commercial performance and the need to finance a relatively large investment programme.

This climaxed with the debating and passing of the 1999 Electricity Act that disaggregated the former UEB into three successor entities handling generation transmission and distribution segments.

These were Uganda Electricity Generation Company Limited (UEGCL), Uganda Electricity Transmission Company Limited (UETCL) and Uganda Electricity Distribution Company Limited (UEDCL).

The Act also provided for establishment of the Electricity Regulatory Authority as an independent sector referee.

It also provided for entry of the private sector into both generation and distribution segments, while government retained monopoly over the transmission segment.

In the wake of the reforms, the 'honeymoon' enjoyed due to the Nalubaale extension did not last