

National New

At the centre of the crisis is a widening mismatch between electricity generation growth and the capacity of the distribution network to deliver that power to end users.

BY MONITOR REPORTER

The sacking of two top bosses at Uganda Electricity Distribution Company Limited (UEDCL) at the weekend has laid bare a deep technical and operational crisis that has plagued the electricity distributor for years, raising fresh concerns about the stability of Uganda's power sector.

An internal status report issued by UEDCL on April 21 shows a utility under mounting strain, battling ageing infrastructure, surging demand, system overloads and persistent breakdowns that have eroded efficiency and driven up financial losses.

In the report, UEDCL directly appealed to the Ministry of Energy and Mineral Development for urgent intervention, warning that without immediate investment, the system risks sliding into a deeper crisis.

"Support UEDCL's mobilisation of funding for urgent network upgrade to improve reliability, match investments across the value chain, support the 'Free Connections Policy' to connect potential customers within 90 metres of existing poles," the document read in part.

At the centre of the crisis is a widening mismatch between electricity generation growth and the capacity of the distribution network to deliver that power to end users.

Uganda's domestic energy generation has grown steadily over the years, reaching 7,827.5GWh in 2025, up from 6,573GWh in 2024, 5,582.77GWh in 2023 and 4,375.07GWh in 2020.

The 2025 figures represent a 19.09 percent increase, driven by rising domestic demand and increased electricity exports to neighbouring countries.

About 72.73 percent of the total energy output in 2025—5,730.11GWh—was generated from large hydro plants along the River Nile.

Overstretched

Beneath this growth, however, lies a distribution network that is overstretched and deteriorating.

Nearly 40 percent of the infrastructure has outlived its lifespan and is now worn out and dilapidated.

"This has resulted in frequent and prolonged outages, poor power quality (flickers & fluctuations), reliance on expensive backup power leading to higher production costs, overloaded transformers and lines due to delayed implementation, maintenance and increased capital cost," the UEDCL report stated.

The scale of infrastructure decay is evident across the network. Of 94 transformers assessed, 36 were critically loaded and require urgent upgrades, while 47 percent are more than 30 years old.

About 20 percent have failing components, including on-load tap changers. Similarly, 21 percent of the 973 protection relays were found obsolete and in need of replacement, while 43 percent of 145 battery banks and charging sys-

The troubles at UEDCL that got bosses sacked



A UEDCL staff at a power sub-station. An internal report by UEDCL shows a utility under strain. PHOTO/ FILE

tems require complete overhaul.

The structural integrity of the distribution network is also compromised. Of the 444,927 medium-voltage pole structures, 12.5 percent are in poor condition and need replacement.

For low-voltage poles, 26.7 percent of the 868,482 structures are in a similar state.

Of the 26,577 distribution transformers, 12 percent are overloaded, while 74 percent lack protection features on both high- and low-voltage sides, exposing them to damage.

Several substations are operating far beyond safe limits. Mutundwe substation is running at 130.2 percent of capacity, Busunju at 124.2 percent, Kajjansi at 104.6 percent, and Lugogo is almost at full capacity.

Experts say loading substations beyond 80 percent violates prudent utility practice and increases the risk of premature asset failure and outages.

A source within UEDCL, who requested anonymity, said the problem extends to major feeders and distribution lines, many of which are heavily overloaded.

"There are feeders like the 33kV Namugongo (408A), 496A is loaded into it (121.6 percent), the 11kV Kigo of 300A now runs at 430A (143.3 percent), and 11kV Nansana meant to carry 390A now 495A (126.9 percent)," the source said.

"That overload violates prudent utility practice of at most 80 percent loading. It also explains the constant outages due to capacity constraints of these lines and greatly compromises the quality of supply," the source added.

The operational impact has been significant. Between May 2025 and March 2026, UEDCL recorded total outage duration of 4,486.59 hours, resulting in energy losses of 20.75GWh, equivalent to about Shs12.33 billion.

The situation is compounded by weaknesses in the transmission net-

work operated by Uganda Electricity Transmission Company Limited (UETCL).

In March 2026 alone, UEDCL recorded 46 transmission-related interruptions lasting a combined 299.06 hours, resulting in a loss of 1.44GWh—valued at about Shs790 million.

"Outages on the transmission grid greatly impact the performance of the distribution network downstream... the distribution network is rendered prone to vandalism due to prolonged outages on the backbone," the report noted.

The Energy ministry moved on May 2 to dismiss Board chairperson Lydia Ochieng-Obbo and send Managing Director Paul Mwesigwa on forced leave, appointing an interim leader-

ship team.

Energy minister Ruth Nankabirwa described the move as part of "routine governance and oversight procedures aimed at strengthening institutional performance, accountability and service delivery."

However, sources say the decision was also influenced by rising energy losses following UEDCL's takeover of electricity distribution from Umeme Limited in April 2025.

Energy losses

Documents show that energy losses stood at 19.12 percent in the second quarter of 2025, before declining slightly to 18.11 percent and 18.42 percent in subsequent quarters—well above the target of 13.65 percent.

An assessment of the distribution sub-sector performance shows that demand grew from 986.4MW to 1,217.7MW (28.5 percent) between April 2025 and March 2026, while the number of customers rose from 2.45 million to 2.76 million.

Monthly energy purchases increased from 534.6GWh in January 2025 to 622.7GWh in March 2026, with daily averages rising from 17.1GWh to 20.1GWh.

Despite this growth, investment in distribution infrastructure has lagged, leaving the system unable to cope with rising demand.

"How can you not have energy losses when the network you inherited is poor?" the source wondered. "There are breakdowns everywhere, substations are full and overloaded, there is tripping everywhere," the source added.

In an earlier report to the minister, UEDCL detailed how operational challenges at the Uganda Electricity Transmission Company Limited (UETCL) are undermining distribution performance, citing heavily loaded and ageing transmission corridors that limit system flexibility during faults.

Challenges. How can you not have energy losses when the network you inherited is in a poor state? There are breakdowns everywhere, substations are full and overloaded, there is tripping everywhere, how then can you not have energy losses? Source

The report pointed to lack of H-1 redundancy at key substations, including Nankabirwa, Kapeeka, Fort Portal, Nankabirwa, Clock Tower, Lugogo, Masaka, Mbarara North, Mutundwe, Nankabirwa, Nkenda and Nkonge, leaving the system exposed during outages.

"The delays in delivery of grid interconnections due to lack of funds, inefficient procurement process, land acquisition challenges... and interruptions on the transmission grid heavily impacted the distribution network performance," UEDCL noted.

Data from UETCL's System Operational Data 2025 report shows several transmission lines recorded hundreds of interruptions, including Mbarara North-Kapeeka (502), Mutundwe-Masaka Central (420), Iganga-Jinja Industrial (406), Masaka North-Mpata (396) and Jinja Industrial-Kamuli (367).

The operational consequences have been severe. In 2025 alone, the transmission network experienced hundreds of breakdowns, triggering unplanned load shedding and energy losses.

Technical faults ranged from transformer overloads and broken conductors to transient line faults.

For instance, a shattered insulator along the Rugonjo-Nkonge line triggered a fault that forced a major load shift to the Masaka West-Mbarara North line, causing further overload and system instability.

The incident led to separation of the Uganda-Rwanda grid, reversal of power flows and eventual isolation of several substations in western Uganda.

In a separate incident at Bujagali substation, busbar protection failure tripped multiple circuits, leading to the loss of more than 340MW of generation from Bujagali and Isimba dams.

The western transmission corridor remains particularly vulnerable due to ageing wooden structures and rising demand.

Several lines, including Mutundwe-Kapeeka and Rugonjo-Nkonge, continue to suffer low reliability.

According to the Ministry of Energy, unplanned load shedding in 2025 resulted in 6.93GWh of unsupplied energy, a sharp increase from previous years. Transmission faults alone accounted for 12.75GWh of lost energy.

UEDCL Manager Control Bright Murekwa noted that key substations such as Kapeeka experienced repeated load trips, disrupting supply to large parts of the country.

"It is important that UETCL expedites the procurement and installation of shunt reactors in the system for voltage control," he said.

Overall, the data underscores a transmission system under strain, with cascading effects on distribution and wider electricity sector.

KEY ISSUES

1. Ageing infrastructure.
 - Old, overloaded network
 - Frequent outages.
2. Demand pressure
 - Strained substations and feeders
3. High energy losses
 - Above 18% vs 13.65% target
 - Technical faults and theft
4. Transmission failures
 - Faults at UETCL
5. Delayed investment
 - Funding gaps, slow procurement
6. Weak coordination
 - Policy and planning misalignment