

# IUEA, GERMANS PARTNER ON BIOGAS EXPANSION

By Nelson Kiva

In an effort to break the chain of cooking with wood or charcoal, three points of action are set to inform expert discussions at the 2026 Biogas Conference to be hosted at the International University of East Africa (IUEA). This is aimed at breaking the tradition of cooking with wood and charcoal.

The conference, scheduled between June 1-3, 2026, is being convened by the IUEA and the Landkreis Giessen District of Germany under the theme: *Biogas for All*.

The IUEA vice-chancellor, Prof. Emeka Akaezuwa, told journalists that the conference will be graced by representatives of municipalities in Uganda, companies in the biogas sector from Germany and Uganda, universities and research institutions from both countries, investors, political and technical administrators, and biogas interest groups. That it is expected to advance clean energy solutions, climate resilience, and sustainable waste management in Uganda.

"Biogas presents a practical and locally relevant solution to energy poverty, environmental degradation and waste management," Akaezuwa said.

"As a university, our role goes beyond teaching to generating

knowledge and innovations that can directly improve livelihoods and support sustainable development."

The cooking of meals, especially in rural areas and among the poorer sections of the urban population, is still done on open fires with wood and charcoal. This has led to a reduction in forest cover, resulting in increasing soil erosion and desertification and a decline in agricultural yields. Smoke gases also have health consequences, especially for women and children.

Akaezuwa said the conference will underscore the university's commitment to applied research and innovation that responds to Africa's development challenges.

The Uganda Bureau of Statistics Energy and Minerals Statistics Report (2024/2025) showed that about 90% of total final energy consumption in Uganda is derived from bioenergy, mainly firewood and charcoal, while electricity accounts for about 2% of total energy use nationwide. It added that electricity is largely limited to lighting and small appliances.

Although electricity generation capacity has continued to grow, with thousands of new connections added annually, household energy use patterns have changed only marginally. The residential sector remains the largest consumer of energy in the country, accounting for more than 60% of total final energy



Prof. Emeka Akaezuwa (right) interacting with partners from the Giessen District and other officials

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consumption, driven mainly by cooking needs.

Biogas adoption remains modest despite favourable conditions for its expansion. It is estimated that fewer than 30,000 functional household and institutional biogas digesters are currently in use across the country, representing less than 1% of households, even though Uganda has abundant organic waste from agriculture, livestock, and urban centres

suitable for biogas production.

Akaezuwa said this gap between energy potential and actual uptake highlights the need for stronger collaboration among universities, policymakers, and the private sector.

"Institutions of higher learning must serve as centres for innovation, policy engagement and skills development. By bringing researchers, policymakers and practitioners together, this conference seeks to turn biogas from a promising concept into a widely adopted solution,"

Akaezuwa said.

## INNOVATION

With funding from the federal ministry for economic co-operation and development of Germany, IUEA and Landkreis Giessen District are building a biowaste fermentation plant in Mubende. The plant will supply a secondary school of 2,800 students with biogas for preparing hot meals.

Akaezuwa said the biogas not used for cooking will be converted into electricity and heat to supply the school and adjacent facilities with electricity and hot water. For this reason, separate collection of organic waste and plastic bottles has been introduced in Mubende since 2024.

Since the deadly Kiteezi landfill collapse in Wakiso district, the Government is considering a similar model for nationwide biowaste recycling.