Uganda battery recycling

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While there are no formal e-waste recyclers operating in Uganda, the market is characterized by a highly complex network of informal collectors, aggregators and recyclers. One of the most hazardous e-waste materials are lead acid batteries. The majority of lead acid battery recyclers in Uganda are unlicensed and operate in dangerous environments without formal training in recycling.

Through the Solar E-Waste Challenge, Engie will utilize their last-mile presence to collect non-Fenix components, especially batteries, in close collaboration with the informal sector. They will develop a competitive incentive scheme to purchase the batteries from scrap dealers and map out the informal sector landscape. Their Solar E-Waste Challenge project aims to:

At the core of their Challenge project is environmental and consumer protection. Engie hopes that their model will encourage other large solar companies to pilot and scale similar e-waste collection models in markets across the continent.

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With the ambition to be at the forefront of global climate action, the Ugandan government is promoting investments in e-mobility and lithium-ion battery production to reduce dependence on energy imports. At the same time, in 2025, Uganda will begin extracting oil from Lake Albert to finance the energy transition, as stated by the Minister of Energy.

Beyond ambiguous political statements, the space of "transition" occupied by low-income communities in Uganda sees low-cost, and often second-hand, lead-acid batteries as critical in shaping the post-grid urban areas, where access to privatized electricity infrastructure is often too high for most of the population. But the thriving Ugandan market promoting solar energy and e-mobility poses similar challenges related to the generation of growing amounts of waste, which is a largely ignored environmental problem (Baraille, Jaglin, 2022).

Expanding on the work of Kasper about storage as infrastructure (2023), in the city of Gulu and Kampala, the study explores the repurposing of second hand lead-acid car batteries from used imported vehicles, their repair in local workshops and the management of spent lithium ion batteries from European e-cars for domestic energy storage.

In conclusion, a look to batteries' circulation, repair, repurposing and recycling patterns in Uganda unveils how batteries as discarded resources produce both "a "mundane infrastructure" of energy poverty" (Cholez, 2019), but also a new environmental challenge, and how the old geopolitics of transferring waste in

countries lacking recycling facilities for new e-waste unveil the relations of toxic capitalism in which the energy transition is embedded.