



An Overview of Uganda's Energy Transition Plan Mere Rhetoric or Achievable ambition?



Credit: <https://fair-energy-transition.eu/>

1. Introduction

Uganda grapples with pervasive energy poverty despite its abundant renewable energy sources. About 22% of the population is connected to the national electricity grid, while around 25% have access to off-grid solar power systems. Access to clean cooking energy is dire, with over 90% of Ugandans dependent on charcoal and wood. Petroleum products and electricity account for only 5% and 1.5%, respectively, of the cooking energy mix, underscoring the pressing need for sustainable and inclusive energy solutions.

2. Energy Transition Plan

To address these challenges, Uganda has embarked on a long-term energy transition journey spanning from 2023 to 2065. The blueprint for this transition, the Energy Transition Plan (ETP), was launched on 6th December 2023, at the side-lines of the 28th United Nations Framework Convention on Climate Change Conference of Parties meeting in Dubai. The Plan aims to modernize and diversify Uganda's energy mix to ensure a secure and affordable energy supply.

3. Access to universal energy

Under normal circumstances, access to electricity and clean cooking energy sources in Uganda would reach about 60% and 23% of the population, respectively, by 2030. However, due to the interventions outlined in the ETP aimed at achieving universal energy access in line with Sustainable Development Goal 7, 45% of the population is expected to be connected to the national grid by 2030. Another third will have electricity from off-grid solar systems, and the remaining 20% will gain access through solar multi-lighting systems.

To achieve universal access to clean cooking by 2030, Uganda plans to fast-track the adoption of improved cookstoves and the use of liquefied petroleum gas (LPG), gradually transitioning to near-full electric cooking by 2050. By 2030, every household is expected to have at least a clean cooking stove, though about 40% of the population will still rely on biomass. It is anticipated that 35% of the population will have shifted to LPG usage, with an additional 15% cooking with electricity.

4. Mitigate energy sector emissions

The ETP aims to mitigate Uganda's greenhouse gas emissions in line with international climate change commitments. While fossil fuel consumption is the primary emitter of greenhouse gases globally, Uganda's leading emissions come from agriculture, forestry, and land use. These sectors, typically carbon sinks for many countries, significantly contribute to emissions in Uganda due to the country's reliance on biomass for over 90% of its energy needs, leading to deforestation and poor land use.

Ensuring universal access to clean cooking energy solutions, as emphasized in the ETP, will address this challenge. Uganda is also optimistic about meeting its nationally determined contribution commitments under the Paris Protocol if the ETP remains on course as planned.

5. Leveraging the extractive sector

While acknowledging the imperative to decarbonize to combat global warming, Uganda views this as a transitional aspiration. The country aims to leverage its anticipated crude oil production and potential domestic refinery to meet its petroleum demands, targeting peak oil consumption by 2040.

Associated gas from crude oil production will facilitate LPG production for cooking energy. Revenues from oil and gas can also fund renewable and clean energy infrastructure.

Uganda's critical mineral deposits will offer economic opportunities and can support global clean energy supply chains. Deposits of graphite, rare earths, copper, and cobalt have been found, with plans for domestic processing. These operations could support utilities and mini-grid developers, reducing reliance on diesel generation in remote mining areas.

6. Electricity

The success of Uganda's ETP relies heavily on electricity. By 2050, electricity demand is expected to grow significantly, requiring 40 times more power than

is currently consumed. To meet this demand, Uganda must invest heavily in expanding its generation capacity, diversifying power sources, and ensuring affordability. Additionally, substantial investment in neglected transmission and distribution infrastructure is essential to improve the quality and reliability of power across the country.

7. Conclusion

Unless translated into action, Uganda's energy transition aspirations may remain mere rhetoric, faltering in its goal of sustainable economic transformation. While the ETP outlines a feasible pathway, Uganda stands at a crossroads, wrestling with the challenge of mobilizing \$325 billion over the next three decades to implement the ETP. The immediate annual investment demand of over \$800 million far outstrips available and committed funding, posing a significant obstacle to achieving universal electricity access in the next six years by 2030, a key deliverable of the ETP.

Additionally, Uganda's power projects have historically faced long lead times. For instance, the decision to develop the Bujagali Dam was reached in 1970, but it was only commissioned in 2012. Similarly, the construction of Karuma Dam began in 2013, yet it remains uncommissioned as of 2024. To increase power production fortyfold by 2050, Uganda as of today needs to have as many projects in the pipeline ready for construction.

The dominant challenge to energy access in Uganda today is the overreliance on biomass, which contributes to unsustainable deforestation and global warming. This issue needs immediate attention through transitional measures like promoting efficient cooking stoves and supporting LPG usage, while also addressing electricity affordability. The government, civil society, and donors can stimulate economic opportunities by supporting initiatives for improved and efficient cooking stoves, thereby driving both environmental sustainability and economic growth.

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Denis is the Managing Partner of the Firm. He is qualified both as a Lawyer and Chartered Accountant with UK training and vast experience serving local, regional and international companies in Sub Saharan Africa. He is recognized as a notable corporate and commercial law practitioner in Uganda.

Before joining Cristal Advocates, Denis spent nearly 10 years at Deloitte, an international professional services firm, where he started his career and rose to senior roles. While with Deloitte, he worked and lived in Uganda, Kenya, Tanzania and the United Kingdom.

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- a) Master of Laws in Petroleum Taxation and Finance with distinction - University of Dundee, UK
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John Teira

John is a Partner with the firm but presently on sabbatical leave. Before joining Cristal, he worked as a Private Secretary to the President of Uganda. Prior to this role, he had worked with Shonubi Musoke & Company Advocates and Post Bank Uganda Limited.

John is presently a Member of Parliament representing Bugabula County North in Kamuli District in Uganda National Assembly.

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Dickens is a Partner at Firm where he also leads the oil and gas practice. Before joining Cristal Advocates, Dickens had served as Company Secretary of the Uganda Refinery Holding Company Limited (URHC) and the Uganda National Oil Company (UNOC) where he played key role in its formation.

Prior to joining the UNOC, Dickens had spent five years as Legal Counsel at the Petroleum Directorate of the Ministry of Energy and Mineral Development, where he evaluated several oil and gas transactions, negotiated contracts, and participated in the preparation of Uganda's oil laws and regulations.

Education

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Bill Page

Bill is a Senior Advisor at the Firm and is a leading global energy and tax practitioner with extensive international experience.

From 1986 to 1998, Bill worked in London with the UK tax authorities and Big Four accounting firms. From 1998 to 2004, he was based in Kazakhstan, working across the Caspian region with Deloitte during a period of major infrastructure development for crude oil production.

From 2004 to 2008, Bill worked in Russia, leading Deloitte's oil and gas industry group and establishing the firm's Sakhalin office. In 2009, he moved to East Africa, where he led Deloitte's energy and resources industry group in Uganda, Kenya, Tanzania, Rwanda, Ethiopia, and Mozambique. Initially based in Kampala, Uganda, he later relocated to Dar es Salaam, Tanzania.

In 2014, Bill returned to the UK to support Deloitte UK teams on projects investing in Africa and remained a key member of Deloitte UK's energy and resource practice until his retirement in September 2018.

Education

Bill is a graduate of Oxford University and completed his inspectors' training with the UK Inland Revenue in 1989.



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