



What are the challenges to the effective implementation of net metering in Zambia?

Zambia has an installed electricity generation capacity of 3,705 MW, composed of 84.9% hydropower, 3.3% solar, and 11.7% coal/other fuels. The ongoing El Niño-induced drought has exposed Zambia's overreliance on hydropower, as the reduction in water levels led to a power deficit of 750 MW in May 2024, rising to 1,360 MW by July 2024. To improve energy security and reduce intermittency, the government plans to increase and diversify Zambia's energy supply.

One element of the government's Integrated Resource Plan for the Power Sector is the implementation of the Net Metering Program. Zambia's state-owned power utility, ZESCO, launched the Net Metering Program on 1 August 2024. The programme allows prosumers (consumers who also produce electricity from renewable sources) to offset their electricity bills by feeding excess power back into the grid.

Given this is a new and untried policy in Zambia, it is valuable to assess the potential challenges that may arise during its implementation. By proactively addressing these challenges, Zambia can maximise the benefit of the net metering initiative and promote the adoption of diverse renewable energy sources.

Policy challenge

If implemented effectively, net metering has the potential to increase the adoption of renewable energy sources, reduce consumers' energy bills, and partially alleviate demand on the national electricity grid. However, the slow uptake of net metering installations in countries which have implemented similar programmes suggests that there are challenges which must be considered. For example, in the first three years following the introduction of net metering regulations in Pakistan, only 815 licences were issued.

It is therefore beneficial to assess the factors which will impact the effectiveness of net metering in Zambia. Cross-country learning indicates that these factors include (but are not limited to) sell-rate design/tariff structure, capital costs/subsidies, information awareness/access, redistributing grid maintenance costs, and installation caps.

Data

- [Zambia's Integrated Resource Plan](#): Least-cost plan for the development of Zambia's power sector.
- [Zambia's net metering regulations](#): Such as prosumer eligibility, connection charges, monitoring, and tariffs.
- [Approved net metering technology](#): List of solar PV modules, energy storage solutions, and inverters.
- [Desirable data](#): Includes (but not limited to) solar PV module purchases, net metering licences issued (with demographics), and rooftop/customer-owned solar generation capacity.



Stakeholders

ZESCO; Energy Regulation Board (ERB); Ministry of Energy (MoE); Presidential Delivery Unit (PDU); Ministry of Green Economy and the Environment (MGEE); Ministry of Finance and National Planning.

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