Towards an effective regulation for rapidly scaling minigrid investments in Zambia

Private sector recommendations

1 October 2024

Executive summary

This White Paper examines the urgent need for effective regulatory reforms to scale minigrid investments in Zambia, a key component in achieving Sustainable Development Goal 7 (SDG7) by 2030. It highlights how Zambia's political will and recent legislative efforts have re-ignited investor interest in the minigrid sector, emphasising its crucial role in providing affordable, reliable and sustainable energy to underserved communities.

Despite commendable steps and initiatives taken by the Zambian Government, including the introduction of the Presidential 1000 Minigrids Initiative and various regulatory interventions, the current regulatory framework remains inadequate. The introduction of the Energy Regulation (General) Regulations, 2023 (SI No. 41 of 2023), and subsequently the Energy Regulation (General) Regulations, 2024 (SI No. 52 of 2024), has led to a complete deregulation of the sector. While this may be a suitable measure for small- to medium-scale captive generation, the regulatory uncertainty introduced will impede investment and sector development.

A well-designed and tailored regulatory framework is essential to attract private sector investment and scale the sector effectively. This White Paper provides policy recommendations for an improved enabling environment for scaling minigrid development in Zambia.

By fostering a true partnership between the Government and the private sector, Zambia can create an enabling environment for investment and drive significant progress towards achieving SDG7.

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Acknowledgements

The insights and recommendations presented in this White Paper build on the public-private roundtable run by the Camco-managed Renewable Energy Performance Platform (REPP) and the Africa Minigrid Developers Association (AMDA) on 14 December 2023, which aimed to facilitate an effective dialogue between minigrid developers, investors, government officials and development partners. The event was attended by both the Ministry of Energy and the Energy Regulation Board (ERB), the Public Private Dialogue Forum (PPDF), Global Energy Alliance for People and Planet (GEAPP), UK's Foreign, Commonwealth & Development Office (FCDO), Multilateral Investment Guarantee Agency (MIGA) and Sustainable Energy for All (SEforALL), as well as minigrid developers and investors.

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Strong political will for minigrids in Zambia can enable the sector to fulfil its crucial role in delivering SDG7

Minigrids[1] hold significant potential in advancing the achievement of SDG7 by 2030, not only in Zambia but across Africa. In recognition of this, the Government of Zambia has identified minigrids as a pillar of its National Electrification Strategy, which underscores their critical role in ensuring the country's most unserved and underserved communities gain access to affordable, reliable, sustainable, and modern energy by the end of the decade.

We commend the numerous strides taken by the Government and its Ministry of Energy, Energy Regulation Board (ERB), Rural Electrification Authority (REA) and other agencies in advancing the sector by providing support and guidance and in positioning minigrids as a vital pathway to increasing electricity access.

We recognise the Government's bold steps in introducing several legislative and regulatory interventions and initiatives aimed at improving the adoption and integration of renewable energy more broadly in Zambia. These include, but are not limited to:

- the design of Zambia's open access regime and net metering regulations
- the introduction of regulatory interventions, such as streamlining licensing processes, which have created a more conducive business and regulatory environment for the minigrids sector, and
- the implementation of the **Presidential 1000 Minigrids Initiative**.

This strong show of political will from the highest levels in Zambia have re-ignited interest from multiple development partners, including the Rockefeller Foundation and SEforALL, and has also sparked interest from investors who have been eagerly monitoring the latest policy and regulatory developments. However, our conversations with minigrid developers, investors and risk mitigation providers suggest that the recent deregulation of the minigrid sector is not conducive to investment mobilisation. Instead, there is a very real risk that the Government's progress will be derailed without the full and direct participation of the private sector in developing appropriate regulatory frameworks and legislation that provide an effective enabling environment that is critical for private sector investment.

In the past, Zambia's renewable energy policies and regulations have been developed in a public sector silo, with limited input from developers and investors and no clear channels for consultation and facilitating information exchange. Developing these channels is even more important today, given minigrids' critical role in achieving SDG7 by 2030 and the Government's proposed new legislative interventions and sector support programmes.

It is crucial therefore that developers, investors and other key industry stakeholders from the private sector are given the opportunity to share their experiences and offer recommendations for growing the sector and making it more bankable.

[1] In this paper, the term 'minigrid' refers to minigrid projects of various sizes – including mesh grids and metro grids – and is technologically agnostic.

The current minigrid regulatory framework is hindering investment required for implementing the Presidential agenda

In 2019, the ERB published a simplified regulatory framework for minigrid development in Zambia (the draft 2019 Minigrid Regulations) that aimed to support the implementation of the Government's rural electrification agenda by catalysing the scaling up of the sector. Despite limited private sector consultation in the drafting, the draft 2019 Minigrid Regulations presented a notable improvement to the enabling environment for private sector activity and capital mobilisation. However, implementation of the new regulatory framework has been hindered by its incompatibility with the prevailing energy sector legislation – namely, the Electricity Act No. 11 of 2019 and the Energy Regulation Act No. 12 of 2019 - which do not provide for differentiated regulation for smaller-scale distributed renewable energy systems. Thus, the existing regulatory framework has prevailed and continued to impede sector development over the past few years.

A new statutory instrument (SI), The Energy Regulation (General) Regulations, 2023 (SI No. 41 of 2023), was introduced in September 2023 with the aim of unlocking the policy and regulatory impasse by completely deregulating the minigrids sector and removing the role of the regulator. Under SI No. 41 of 2023, minigrid developers are no longer required to secure permits or licences for projects under 250kW. This threshold has recently been extended to 5MW under the Energy Regulation (General) Regulations, 2024 (SI No. 52 of 2024).

We understand that both SI No. 41 and more recently SI No. 52 were intended to be interim measures aimed at accelerating renewable energy deployment in the country. However, while it may be suitable for business models such as small- and medium-scale captive solar, the move towards complete deregulation is not compatible with investor requirements for minigrid financing. This is particularly true of the project finance approach, given the significant risks deregulation on this scale introduces and the absence of documentation (permits, licences, tariff approvals) to mitigate those risks from an investor perspective. In the current deregulated sector scenario, project development risks are considered very high, increasing the availability and cost of financing.

Furthermore, the new SI has also failed to address several issues relating to the operation of the minigrids, thereby creating yet further regulatory uncertainty, as shown in the table below.

Area	Unresolved issues and questions
Existing licensed developers	How will already licensed minigrid operators engage with the ERB following issuance of SI No. 52 of 2024? Will the compliance requirements still hold for currently licensed activity/ies under this new SI?
Construction permits	Will developers need to renew permits that are about to expire given that this is a requirement for issuance of commencement orders for certain projects, e.g., European Union (EU)-funded IAEREP Demonstration Projects?
Tariffs	How will the tariff setting be handled for projects that are fully licensed? Can the developer adjust the tariff as they wish, or must they follow what was already approved by the ERB? For new projects, will there be a need to notify the ERB on the intended tariff methodology and actual tariffs to be charged at a particular site?
Compliance	Who will be responsible for ensuring technical, health and safety compliance and consumer protection, which were initially under the scope of the ERB?
Grid encroachment	How will site exclusivity and grid encroachment be handled, since this was only provided for under the draft 2019 Minigrid Regulations and not under the SI?
Prerequisite Government approvals/clearance	Will developers still be expected to obtain REA endorsement, Zambia Environmental Management Agency (ZEMA) approvals and National Heritage Conservation Commission (NHCC) clearances under the new SI?
Investment endorsement	As the sector regulator, will the ERB be able to provide investment endorsement or letters of support/recognition should this be a requirement to securing investment finance from would-be investors?

Given the current uncertainties surrounding the new regulatory framework, which is insufficient to drive the minigrids sector forward, it is highly unlikely that the Government and key stakeholders, including the private sector, will be able to achieve SDG7 by 2030 through accelerated efforts and scaling.

Key features of a 'bankable' regulatory framework for minigrids

While individual market characteristics need to be considered when developing new policies and regulation, extensive minigrid development across Sub-Saharan Africa in recent years has highlighted the importance of several key factors for effectively mobilising investments in minigrids.

- **Stability, clarity and transparency are important for improving investor confidence.** Given the long-term nature of financing structures for minigrids, project sponsors and financiers need certain assurances to ensure the security of their investments. For example, **documented permission for the investee to develop and operate minigrids at a given location or having clear provisions for the arrival of the grid**.

  Minigrids are a different asset from grid-connected projects (IPPs) or commercial and industrial renewables projects because they do not have a single guaranteed off-taker contracted through an off-take agreement. With off-take agreements, many risks can be contractually mitigated; but that is not the case for minigrids, which is why **regulation and permits/licences are critical to address project risks such as the eventuality of grid encroachment**.

- **Regulation should be appropriate to the size of the projects**, striking the right balance between supporting effective and timely sector growth while protecting consumer interests. Unlike large grid-connected projects which are tightly regulated, minigrid projects require a light-handed approach to regulation and for developers to be able to apply for permits/licences and tariff applications on a portfolio basis.

- **A transparent tariff-setting mechanism is required**, which ensures that developers, operators, lenders and investors can recover investment costs within a reasonable timeframe and at a margin of return on investment that is in line with the level of risk applicable to the project. Minigrid regulations should clearly outline the methodology, process and timeline of tariff approval for all categories of minigrids.

Absence of private sector input

While the Zambian Government's commitment to growing the country's minigrid sector is commendable, input from the private sector on both its short- and long-term legislative and regulatory interventions has been consistently neglected.

This has not always been the case, however. The Government and the ERB have previously engaged with private sector minigrid developers (through their industry associations) and other stakeholders on the need to make the sector more bankable through providing an enabling and conducive regulatory environment. In the case of the draft 2019 Minigrid Regulations, for example, the proposed regulations were 'road tested' in readiness for full implementation and the private sector was actively approached for feedback, with AMDA providing extensive and detailed submissions. Regrettably, the regulations could not proceed to full implementation owing to inadequacies in the primary legislation (the Energy Regulation Act and the Electricity Act) and private sector recommendations on the 2019 Minigrid Regulations could not be implemented.

Since then, there has been no further engagement between the Government and the private sector on the draft 2019 Minigrid Regulations, except for occasional updates from the Government on how it has been working to align the regulations with primary legislation. It remains unclear how far this process has reached and at what stage the private sector and other industry stakeholders would be reapproached for further feedback. Similarly, the decisions behind SI No 41 of 2023 and SI No 52 of 2024 were made without a proper assessment of the potential impact on

the minigrids and other off-grid sectors and without consultation with the industry on what was needed to be done to make the sector bankable.

The lack of non-governmental stakeholder involvement in the current legislative and regulatory interventions would suggest that the Government has opted for a unilateral approach to developing the minigrid sector for now, devoid of private sector input.

While the deregulation aimed to alleviate regulatory challenges faced by minigrid developers and serve as an interim solution pending long-term legislative amendments, it has, in fact, compounded the situation, particularly regarding the sector's long-term bankability.

Proposed way forward

While SI No. 23 and SI No. 24 may be suitable for the development of captive generation and could present a temporary solution for pilot minigrid projects, it falls short of creating the conditions necessary for the minigrid sector to scale in alignment with the ambitious Presidential policy agenda. A tailored regulatory framework is essential to attract private sector interest and mobilise investment.

We recommend that the Zambian Government and the ERB review and amend existing energy sector legislation - most notably, the Electricity Act No. 11 of 2019 and Energy Regulation Act No. 12 of 2019 – without delay, to lay the foundations for a customised and fit-for-purpose regulatory framework for minigrids and other decentralised renewable energy systems.

Following this step, it is crucial that the regulator be empowered to establish effective minigrid regulations by building on the draft 2019 Minigrid Regulations and – critically – engaging with the private sector. This approach should address key risks identified by investors and developers, ensuring the regulations foster an environment that effectively mobilises private investment for energy access in Zambia.

Recommendations to enable sector scale up

1. The deregulation of distributed energy systems introduced through the recent SIs is not conducive to supporting long-term scaling of the minigrid sector. To achieve rapid and lasting progress, the primary focus of key stakeholders in the Ministry of Energy, the Presidential Delivery Unit (PDU) and the Energy Regulatory Board (ERB) needs to shift immediately to the design and implementation of a regulatory framework that is conducive to mobilising private sector finance and growth.

2. The Electricity Act No. 11 of 2019 and Energy Regulation Act No. 12 of 2019 should be amended to allow for the implementation of light-handed regulation for minigrids.

3. The draft 2019 Minigrid Regulations should be revised in line with the proposed legislative amendments and in consultation with the private sector. The Regulations should be implemented without delay to ensure that the envisioned light-handed approach achieves its objectives of attracting new investments.

4. In the interest of transparency and clarity, the Government should ensure that the industry and all key stakeholders are regularly consulted and updated on ongoing regulatory developments and progress on the implementation of agreed recommendations. Additionally, a clear and realistic timeline for implementing the regulations should be provided, along with sector-specific support and guidance to facilitate smooth compliance and adaptation.

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