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# Lessons Learned in Mini-Grid Regulation



# Background

- **Key lessons learned** especially for regulators and agencies
- Implementation of mini-grid projects **under new** and **well-developed regulatory frameworks**
- The goal is to ensure **efficient service delivery** and **investment security**
- Stemming from international experience:
  - Benin, Ethiopia, Haiti, Kenya, Myanmar, Nigeria, Rwanda and Tanzania



# Overview of Lessons Learned

## Four key regulatory touchstones:

- Certainty
- Flexibility
- Fairness
- Streamlining

## Across six regulatory issues:

- Licensing and concession granting
- Tariffs
- Technical & performance standards
- Stakeholder relations
- Grid arrival
- Grant disbursement and procurement

Need for mindset change from public institutions to move from pilot stage of several tens of mini-grids under operation to thousands as per the common targets set in National Electrification Strategies.

## Example of conducive measures:

- Offer long periods of licensing or concession >30 years like any other infrastructure projects
- Offer tax exemption on VAT on the tariff applied to end-users and on corporate income tax (in addition to import duties)



## Certainty



*Clear and consistent rules are essential to minimise investment risks, reduce opportunities for corruption, and secure investments*

- Licensing periods should exceed 20 years
- Regulators should resist pressures to renege on approved mini grid tariffs and arrangements
- Grid extensions should be consistent with official plans and off-grid sites need to be clearly delineated and secured
- Set and publish fiscal incentives. E.g. exemption on tariff VAT and corporate tax
- Ensure a proper O&M plan is included
- Establish a pre-qualification certification for mini grid developers to eliminate low-quality developers



## Flexibility



*Flexibility allows developers to adapt business models, engineering designs, and tariff structures that meet the needs of the local community with minimum waste and inefficiency*

- Regulators need to be flexible in allowing the transfer of mini-grid ownership and operating rights
- Encourage mini-grid operators to adopt tariffs that vary by time of use (TOU) and offer lower tariffs for customers willing to shed load
- Appraise initial tariffs with flexibility and allow for adjustments



## Flexibility

- Tailor distribution standards to suit local conditions
- Recognise that requirements of ultra-high reliability increase costs.
- Regulators should maintain regular formal and informal direct contacts with developers.
- Disburse performance-based grants as milestones are met
- Consider differentiated grants based on project location





## Fairness



*Fairness ensures that a mini grid industry is viable, that investors will find the environment suitable for investing, and ultimately rural communities gain access to critical energy services*

- Recognise that viable mini grid tariffs are higher than main grid tariffs
- Tariff regulations should encourage mini grids to incentivise productive electricity usage
- In the framework of the tariff revision mechanisms, the regulator needs to be aware of price elasticity

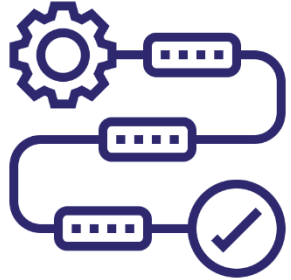


## Fairness

- Set, publish, and enforce minimum quality standards
- Enhance regulatory transparency by publishing stakeholder comments, applications and approvals, on the regulator's website
- Include compensation rules for early grid arrival
- Prepare and share technical design studies







## Streamlining



*Time is precious for regulators as well as for developers and thus it is essential to set up processes that conserve this precious resource.*

- Aim for simple and straightforward applications for licensing
- License batches of clustered mini grids
- Regulators should adopt a standard tariff model and make this available to mini grid developers for their submissions
- Standardise, digitise, and automate tariff review
- Enable mini grid operators to adjust approved retail tariffs automatically
- Provide simplified standard study templates
- Streamline the disbursement of grants while ensuring it does not lead to corruption



# Thank you for your attention!

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