

Mainstreaming mini-grid tariff settlement tools and methodologies across Sub-Saharan Africa Regulators”.

Progress Update to the Project Steering Committee

26 AUGUST 2021

BY THE AFRICA ENERGY SERVICES GROUP (AESG)

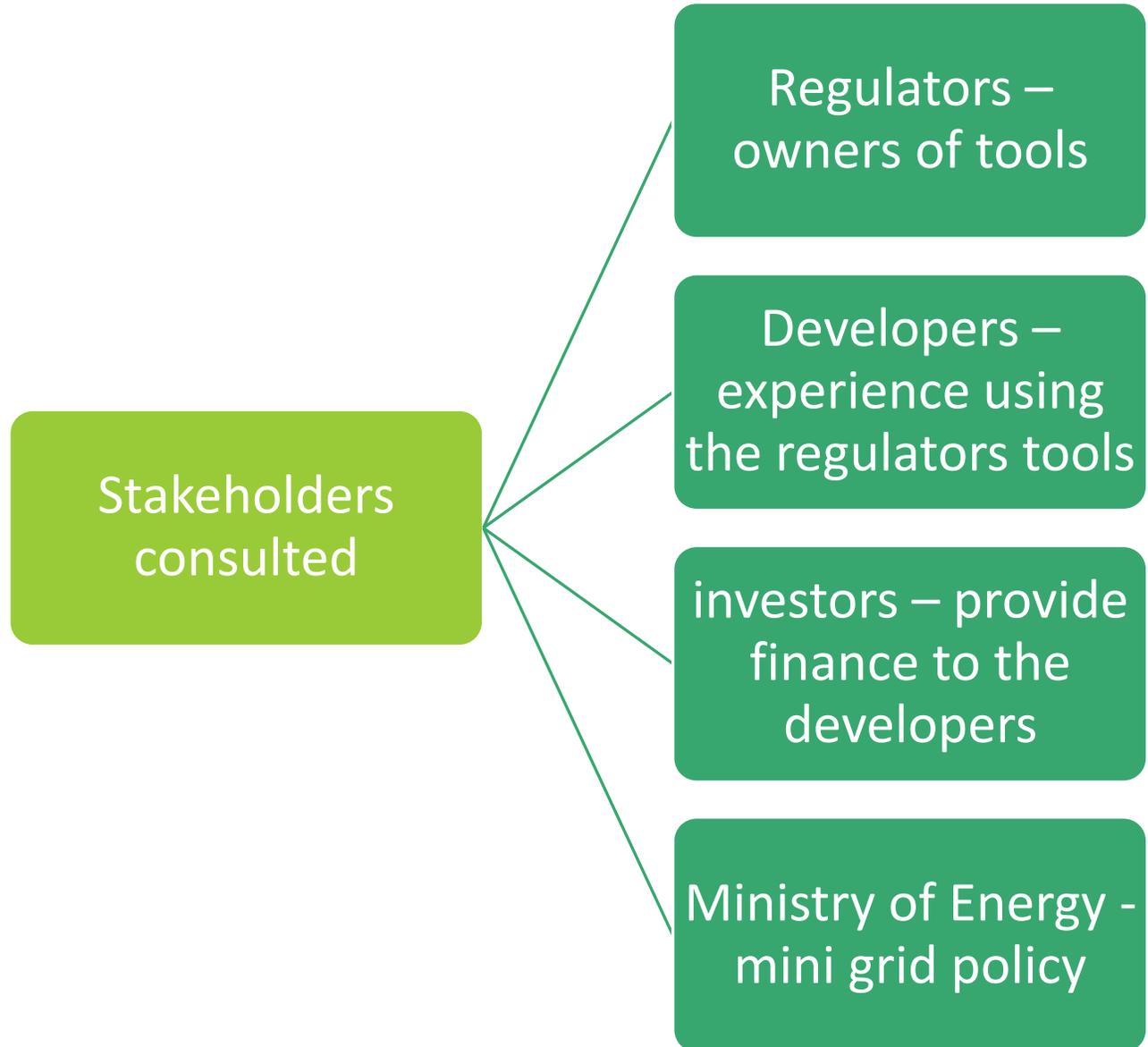
Presentation Outline

1. Introduction

3. Stakeholders Consultations Report

3. Next Steps

Introduction



Developers' Consultations

The developers were interviewed during July and August 2021 to provide perspectives on

- Countries of operation and factors influencing choice of countries
- Experience and lessons from using the regulator's tariff tools
- Recommendations for a standardized tariff tool

Developer's countries of operation and factors considered in going to a country

Countries	Factors considered in entering a country
<ul style="list-style-type: none">• Tanzania• Kenya• Uganda• Zambia• Nigeria• Sierra Leone• Benin, and• Cameroon	<ul style="list-style-type: none">• the existence of a mini grid regulatory framework• electrification status wherein government is willing to use mini grid as a driver of rural electrification• market size• availability of funding support• Political environment/ease of doing business

Experiences and Lessons

There is recognition that a lot of progress that has been made in the tariff setting

But there are still concerns to be addressed

Developers' concerns about current tariff settlement frameworks vary from country to country

Experiences and Lessons

Markets want lower tariff, but these lower tariffs are not cost reflective, and the push for a lower tariff does not come with subsidy support. The subsidy burden is left to the developer.

Governments are more interested on levels of tariffs than the tariff tool per se. It is therefore important to get governments buy-in

Even where a tool is working fine, a big difference between the national utility tariff and mini grid cost reflective tariff is on the longer term not sustainable because of political pressure to bring this tariff to be aligned to the grid

Lessons from using the tariff tools

The tools are complex for some users

the tools need a lot of details to get the tariff output

the tools do not disclose all the variables that are fixed

there is a lot of learning required on project differences and costs benchmarks

the regulators need adequate capacity to use the tool

lack adjustments for uncontrollable factors like foreign exchange and inflation

regulators take more time to process tariffs than what is specified in the regulations

Proposals for a standardised tool

Balance between the level of details requested by regulators in tariff tool and the developers' preferred broad categories

Tools should disclose the inputs that are fixed

Regulators should develop benchmarks of costs but at the same time recognize that each project is different

Tool should provide for portfolio tariff application

Tariff control cycle of at least 5 years with an option for life cycle tariffs

Provide for annual automatic adjustments of foreign exchange, inflation escalation, fuel cost adjustment

Provide training on use of the tariff tool

Tool should allow developers flexibility to do their own tariff structuring

Proposals for a standardised tool

Tariff tool to show the gap between the cost reflective tariff, a standardised national mini grid tariff (rural tariff) and the subsidy required - subsidy be funded by donors and governments

Provide clarity on how to calculate the compensation when the national grid arrives

Allow for modular designs to mitigate the risk of oversizing

Policy certainty and policy stability is required once investors make commitments based on existing frameworks

Investors Consultations

- The Investors interviewed during July and August 2021 provided perspectives on:
 - Investments in mini grids
 - Why mini grid tariff settlement tools are of interest to the investors
 - Concerns about the current tariff settlement frameworks in the countries of interest
 - Proposals for tariff settlements

Mini grids investments

- To decide to invest, some of the investors look at regulatory framework (e.g., energy strategy/ master plans) even if it is not perfect, so long as it shows goodwill by government to make the mini grid sector work.

Countries	Types of financing
<ul style="list-style-type: none">• Kenya, Tanzania, Sierra Leone, Somalia, Nigeria, Benin, Madagascar, Lesotho, Rwanda, Uganda, , Zambia, Rwanda, Ethiopia, and Ghana	<ul style="list-style-type: none">• Equity• Project Finance/Debt• Results Based Financing

Importance of tariff settlement tools

The biggest challenge in scaling up is the tariff-The tool gives investors and developers confidence; and it gives visibility on the tariff

Developers need tariffs to get funding and investors will consider cash flows from these tariffs in making investment decisions

Tariff tools are essential to speed up tariff approval processes

Challenges with current tariff settlement frameworks

Challenges for donors is that projects are too slow, and not absorbing the available grant funding

Governments don't always follow these tools because they want to reduce the tariff - government overrides the existing mini grid regulatory framework

Tools are separate from Regulations, even though it may be written in Regulations that tariff tools will be developed

The speed of regulatory approvals is very slow and lengthy

Regulators are doing their best given this is a new market, but the regulators capacity is constrained.

Proposals

Tariff tools needs to be in conjunction with strong regulatory frameworks

The tool needs to be simplified and provide longer tariff control periods instead of a year

Tariffs must be cost reflective. If a cost reflective tariff is not possible, the tariff must be accompanied by a subsidy

Consider having standardised rural tariffs for mini grids instead of different individualised tariff and using this rural tariff, work out a subsidy that is required for each village/project

Proposals

Tariffs should consider price elasticity of demand-households have a specific budget to spend on energy so if price is low, they increase usage but within that specific budget

Consumption is also seasonal – developer should design tariffs with seasonality in mind

AFUR initiative should come up with some regional guidelines on speeding up the tariff approval process

If government wants to change a regulatory framework, there must be a formal way of doing so, to provide certainty

Proposals

The cost of finance varies from project to project and from funder to funder. This variation should be recognized by regulators

Commercial debt is not accessible, so the target capital structure used by regulators is not achievable in practice

Tariffs need to be politically acceptable (cost reflective tariffs are too high) and financially workable (subsidy need to be reasonable)

Ministry of Energy Consultations

- The Ministry of Energy were interviewed during July and August 2021 to provide perspectives on:
 - Electrification policy framework on the role of off grid mini grids in the country's electrification strategy
 - Service territory allocation and licensing
 - Mini grids tariff setting, tariff tools and cost reflective tariffs

Electrification policies and plans

Zimbabwe – Rural Electrification Masterplan demarcates rural areas for electrification with mini grids. Rural electrification fund (REF) did an economic feasibility for major sites that investors can use to pick a sites

Rwanda – National electrification strategy is to ensure 100% universal access by 2024 through grid, micro grids, mini grids and solar home systems. There are demarcated areas for mini grids

Uganda – Rural Electrification Masterplan identifies areas to be electrified through off grid systems

Service territory allocation and licensing

- Zimbabwe – investors pick a site from those sites identified by REF. The Rural Electrification Fund signs an MOU with the private grid developer on behalf of government of Zimbabwe (for the life of the plant)
- Rwanda – Mini grid guideline provide for both solicited and unsolicited projects– solicited/tendering is for mini grid sites whose feasibilities studies have been done by Ministry. For unsolicited the sites must be in demarcated areas nationwide
- Uganda – the government packages the projects and tenders them out. Private sector puts in their bids which are then selected on technology and lowest price.

Mini grids tariffs

- Zimbabwe –
 - There is an independent regulator (ZERA) that is responsible for off-grid tariff regulation
 - The regulation is light-handed. The tariff is agreed upon between the developer and the community and government/regulator does not interfere
 - No government interference on tariffs. Government can subsidize to lower tariffs, but if government hasn't put in anything, it will not ask for lower tariffs

Mini grids tariffs

- Rwanda –
 - The independent regulator (RURA) regulates the tariffs, and the government does not intervene
 - Those operational are charging cost reflective tariffs, but the end users are complaining about the cost of the tariff
 - The tariff is 4x to 5x that of the grid, raising the likelihood that there is going to be competition with the grid

Mini grids tariffs

- Uganda –
 - The regulator (ERA) is responsible for off grid tariff regulation.
 - The regulator provides the license and caps the tariff to cover generation and O&M expenses.
 - The caps are known to bidders before they bid. The bidders propose their own tariffs in the bid within the cap
 - consumers are always wanting lower tariffs. But government position is that consumers are better off with higher tariffs than no power at all
 - Low power usage by MG consumers in early years of the MG reduces revenues and puts pressure to increase tariffs

Government support to tariff tools

- Zimbabwe - There is value in a tariff tool. The government wants to see a tariff that people can afford to pay
- Rwanda - Tool will ensure cost comparison by generation technology
- Uganda - Energy being capital intensive, governments cannot do it alone and need to encourage private sector participation with transparent mini grid policy frameworks

Next steps

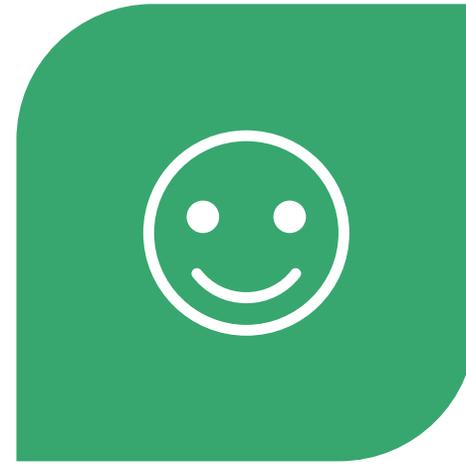
Baseline report by
end Q2 for
workshop in the
next quarter



Recommendations
on high level
structuring of the
tool



END



THANK YOU

Q & A