



Ethiopian Regulator Approves Groundbreaking Mini-Grid Directive, Improves Licensing Process, Paving the Way for Increased Electrification



June 2021 - In December 2020, the Ethiopian Energy Authority (EEA) announced to its national and international partners that a groundbreaking *Mini-Grid Directive* was approved by the EEA Board. This *Directive* represents an essential first step in establishing a strong and well-aligned regulatory review process that will help to create an enabling environment for private sector investment in mini-grids and increase connections for consumers in Ethiopia.

With support from the United States Agency for International Development (USAID) and Power Africa, the National Association of Regulatory Utility Commissioners (NARUC) supports the EEA in strengthening its regulatory frameworks through the Ethiopia Energy Regulatory Partnership. Most recently, the EEA collaborated with NARUC to finalize Ethiopia's *Mini-Grid Directive*, which establishes a transparent regulatory framework that will support the country as it works towards achieving its electrification goals of expanding access to sustainable, affordable, and reliable electricity.

Additionally, in cooperation with the EEA, NARUC produced five technical guides designed to assist the EEA in implementing the *Mini-Grid Directive* and conducting periodic reviews. These guides include: an *Implementation Roadmap*, *Licensing Guidelines*, a *Strategy Memo for Regulation Modification*, *Off-Grid Technical Standards and Green Mini-Grid Feasibility Study Guidelines*, and *Regulatory Best Practices for the EEA*. Through the use of these guides, the EEA will be better able to provide certainty to investors and ensure the sustainability of mini-grid deployment.

Mini-Grid Development in Ethiopia

Although Ethiopia is unique in that almost 100% of its power generation coming from low carbon energy resources (mainly hydropower),ⁱ further diversification of the energy mix will be key to providing electricity to rural communities and ensuring adequate energy supply. Approximately 70 million Ethiopians currently lack access to the electrical grid, and there is also great disparity between rural and urban access (ranging from five to 20% in rural areas to 80-90+% in urban areas).ⁱⁱ

To address this, the Government of Ethiopia launched the National Electrification Program (NEP) in 2017, which serves as an action plan for achieving universal electricity access nationwide by 2025.ⁱⁱⁱ It is envisioned that 65% of electricity access will be provided by grid solutions, while the remaining 35% will come from off-grid technologies such as mini-grids.^{iv} Mini-grids are installations disconnected from a larger power grid, and involve small-scale electricity generation that is well-suited to smaller, more remote communities. As they can generate electricity from fossil fuels or from renewable energy resources such as solar, wind, hydropower, and biomass (making them 'green' mini-grids), they can significantly enhance energy security and reliability.^v Mini-grids are also an especially promising solution for increasing electrification in Ethiopia, as the country's varied topography creates natural barriers to grid expansion and low rural population density results in high connection costs.^{vi}

As stated in the NARUC [Practical Guide to the Regulatory Treatment of Mini-grids](#), there can be some significant barriers to their development, including uncertainty regarding mini-grid investment

decisions. A strong investment climate arises when investors have confidence in the ability of the utility to provide safe, reliable, and affordable service to customers, thus ensuring they can preserve and enhance the value of their invested capital. In the case of Ethiopia, the energy regulator is striving to minimize investment risk by demonstrating that mini-grids can be operated efficiently and sustainably in the country.

The Importance of Developing a Mini-Grid Regulatory Framework

Developing a mini-grid regulatory framework is integral to boosting investor confidence, and requires comprehensive stakeholder engagement to establish effective policy, planning, and regulations. As many aspects of mini-grid regulation are heavily context dependent, stakeholder perspectives – including those of policy makers, mini-grid developers and operators, customers, and the local community – are important to take into account in order to ensure regulatory decisions reflect balanced goals and interests.^{vii} With this in mind, the EEA has made great progress by passing the *Mini-Grid Directive* and developing its accompanying resources, which will help to create an enabling business environment and engage stakeholders in order to meet electrification needs.

The five implementation guides that the EEA and NARUC developed to accompany the *Mini-Grid Directive* cover a variety of topics related to the regulation of mini-grid development, including:

- Implementing the mini-grid framework
- Designing and improving standards for electric service quality
- Conducting feasibility studies as a means of proving that green mini-grids can provide or improve electricity access in a given location
- Sharing international best practices on regulatory approach, tariff setting, exclusivity, and resolving disputes between stakeholders
- Conducting future periodic reviews to evaluate the efficiency of mini-grid projects and explore their impacts

Navigating the Mini-Grid Licensing Process

Notably, one of the guides focuses on enabling mini-grid developers to complete the licensing process more efficiently. Mini-grid licensing pertains to the process private developers undergo in order to obtain licenses for the generation, distribution, and sale of energy through mini-grids. For regulators, the licensing process provides an opportunity to review and approve a proposed project and allows an element of control and oversight over developers.^{viii}

The mini-grid *Licensing Guidelines* summarize the new licensing processes that accompany the *Mini-Grid Directive*, outline license requirements, and list authorities that are involved. The document also provides an overview of Ethiopia's Energy Proclamation and energy regulation in mini-grid licensing as of December 2020, and is meant to be updated by the EEA on an as-needed basis to ensure the most current practices are in place.

As the EEA is charged with regulating mini-grids through a licensing regime, the *Licensing Guidelines* will serve as a key resource for it to help mini-grid developers navigate the project approval process and better comply with the existing regulatory framework. By providing potential investors with access to transparent regulation, the EEA can effectively decrease any existing uncertainties or confusion around regulatory requirements or commercial viability. The *Licensing Guidelines* document has been posted on the EEA's website for public access.^{ix}

Since issuing the *Mini-Grid Directive*, Ethiopia has seen an increase in applications for licenses. There are several international investors who want to join this sector as soon as possible, and they will likely be among the first licensees under the new *Directive*. Two known investors have plans to complete the licensing application by September 2021 with a goal to start operations by December

2021. In order to better understand the licensees' experience with the process upon its completion, NARUC is in coordination with the Energy & Investment Law Firm that represents them. NARUC will support the EEA in making updates to the *Licensing Guidelines* accordingly.

The passing of the *Mini-Grid Directive* is the first step of many towards improving the livelihoods of Ethiopia's citizens, encouraging private sector development, and implementing off-grid electrification. Moving forward, NARUC will continue to support the EEA as it works to meet national development goals and strengthen its regulatory frameworks to establish a more reliable grid, add new power connections, and create an enabling environment for private sector investment in Ethiopia.

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ⁱ "National Electrification Program 2.0 Integrated Planning for Universal Access." Federal Democratic Republic of Ethiopia. <https://www.powermag.com/wp-content/uploads/2020/08/ethiopia-national-electrification-program.pdf>

ⁱⁱ "Off-Grid Solar Market Assessment: Ethiopia." USAID. https://www.usaid.gov/sites/default/files/documents/1860/PAOP-Ethiopia-MarketAssessment-Final_508.pdf

ⁱⁱⁱ The NEP was updated and relaunched as NEP 2.0 in March 2019.

^{iv} "National Electrification Program 2.0 Integrated Planning for Universal Access."

^v "Minigrids." NARUC. <https://www.naruc.org/international/where-we-work/global-initiatives/minigrids/>

^{vi} "Technical Assistance to the Ethiopian Electric Authority (EEA) on Off-Grid Regulatory Frameworks: Final Project Report." NARUC. PDF.

^{vii} "Practical Guide to the Regulatory Treatment of Minigrids." NARUC. <https://pubs.naruc.org/pub/E1A6363A-A51D-0046-C341-DADE9EBAA6E3>

^{viii} Idem.

^{ix} "Technical Assistance to the Ethiopian Electric Authority (EEA) on Off-Grid Regulatory Frameworks: Licensing Guidelines." NARUC. http://www.eea.gov.et/media/attachments/Flyer%20%20Magazine/ETH_Off-Grid%20Licensing%20Guidelines_NARUC%20STTA.PDF