USAID
FROM THE AMERICAN PEOPLE

POWER AFRICA
A U.S. GOVERNMENT-LED PARTNERSHIP

TECHNICAL ASSISTANCE TO THE ETHIOPIAN ELECTRIC AUTHORITY (EEA)

ON OFF-GRID REGULATORY FRAMEWORKS

LICENSING GUIDELINES

January 2021
This publication was produced for review by the United States Agency for International Development (USAID). It was prepared by the National Association of Regulatory Utility Commissioners (NARUC).

LICENSING GUIDELINES

Project Title:	Technical Assistance to the Ethiopian Electric Authority (EEA) On Off-Grid Regulatory Frameworks
Sponsoring USAID Office:	AFR/SD
Cooperative Agreement #:	AID-OAA-A-16-00042
Recipient:	National Association of Regulatory Utility Commissioners (NARUC)
Date of Publication:	January 2021
Author(s):	Alberto Rodríguez Gómez (TTA), Griffin Flannery, Jamie Daudon, Kelly Kneeland, Elisa Perry, Mathew Lee, Emily Chessin, and Laura Simmons-Stern (Cadmus)

National Association of Regulatory Utility Commissioners

This publication is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the National Association of Regulatory Utility Commissioners (NARUC) and do not necessarily reflect the views of USAID or the United States Government.

Table of Contents

List of Figures

List of Tables

List of Acronyms or Abbreviations

BoWIE	Bureau of Water, Irrigation and Energy
CSC	Customer Service Cost
DRR	Distribution Revenue Requirement
EEA	Ethiopian Energy Authority
EEU	Ethiopian Electric Utility
EIC	Ethiopian Investment Commission
ESIA	Environment and Social Impact Assessment
HH	Households
kW	Kilowatt
LV	Low Voltage
MV	Medium Voltage
MTF	Multi-tier Framework
MoFEC	Ministry of Finance and Economic Cooperation
MoWIE	Ministry of Water, Irrigation and Energy
MoU	Memorandum of Understanding
NEP	National Electrification Program
O&M	Operation and Maintenance
ORT	Off-grid Retail Tariff
OGT	Off-grid Generation Tariff
ODT	Off-grid Distribution Tariff
PPP	Public Private Partnership
PV	Photovoltaics
RAB	Regulatory Asset Base
RR	Revenue Requirements
SHS	Solar Home System
VAT	Value-Added Tax
WACC	Weighted Average Cost of Capital

1 Introduction

1.1 Intended Audience

This guide aims to summarize the current licensing processes, relevant documents, proclamations, regulations, and directives, and stakeholders involved in mini-grid licensing in Ethiopia as of December 2020. It will enable mini-grid developers in Ethiopia to: (i) more easily comply with the current regulatory framework, and (ii) complete the licensing process more efficiently.

This guide will also support private mini-grid developers in navigating the project approval process as a "one-stop-shop" reference document.

This document is meant to be used in the near and medium term by mini-grid developers and the Ethiopian Electric Authority (EEA). It should be updated by EEA as the directives evolve.

The information found in this document can be referenced back to the following legal documents:

- Energy Proclamation No. 810/2013
- Council of Ministers Energy Regulation No. 447/2019
- Federal Democratic Republic of Ethiopia National Electrification Program 2.0 (2019)
- Investment Proclamation No. 1180/2020
- Investment Regulation No.474/2020
- Investment incentives and investment areas reserved for domestic investors council of ministers Regulation 270/2012[1]
- Cooperative Societies Proclamation No. 147/1998
- Rural Land Administration and Land Use Proclamation No. 456/2005
- Commercial Registration and Licensing Proclamation No. 980/2016
- The Final Mini-grid Directive No. 268 /2020

Additionally, information included in these guidelines has been sourced directly by in-person interviews during a January 2020 mission with relevant stakeholders in the Ethiopian off-grid industry, such as developers, regulators, and donors and an online consultation on the draft document with the EEA on September 16, 2020.

In addition, in areas where the existing proclamations, regulations, or directives are silent on specific steps for licensing a mini-grid, the guide provides suggested steps for developers and investors to consider. These suggested steps are based on best practices for investing in, developing, and operating mini-grid projects and should comply with the existing regulatory framework and latest regulations in Ethiopia.

1.2 Ethiopia's Approach to Electrification

Ethiopia's targets, objectives, and approach to rural and urban electrification are explained in detail in the 2019 National Electrification Program 2.0 (NEP 2.0), where the Government of Ethiopia aims to

[1] Provisions of the investment incentives remains valid

achieve universal electricity access by 2025. As part of this strategy, 35% of the population (approximately 30 million people, or over 6 million households) are expected to be electrified either via solar home systems (SHS) or mini-grids.

The plan to achieve these targets consists of 4 components divided into 2 phases (2025 and 2030), as described in the table below.

Table 1. Summary of the Government of Ethiopia National Electrification Program 2.0

Distance to National Grid	Component electrification strategy as per NEP 2.0	Phase 1: 2025	Phase 2: 2030
<2.5km	A. On grid access (customers within 2.5km from national grid)	65% of the population (15 million households)	96% of the population
	B. Off-grid access, short-term pre-electrification	3.3 million HH served with off-grid technologies first (SHS)	3.3 million HH connected to the national grid
2.5km - 25km	C. Off-grid access, mid-term pre-electrification	5 million HH with off-grid technologies (SHS + mini-grids)	5 million HH connected to national grid (least cost)
> 25km	D. Long-term off-grid	0.9 million households (4% of the population)	

Mini-grids will play a critical role in achieving these targets, and a joint effort by the public and private sectors will be required to deploy them at the scale required. Four business and ownership models (or implementation models) are currently used in Ethiopia:

1. Public utility ownership
2. Private utility development and ownership
3. Co-operative model
4. Hybrid public-private model (PPP)

1.3 Legal and Regulatory Framework Currently Applicable to Mini-Grid Development and Licensing in Ethiopia

In Ethiopia there are three levels of law making. The primary level of law making is carried out by the parliament, the Ethiopian House of People's Representatives (HPR), and the laws that the HPR enacts are known as proclamations. The second and third levels of law making are made at different levels of government through delegation by the HPR. At the second level, the Council of Ministers (CoM) is the main law maker and laws enacted by CoM are known as regulations. Proclamations and regulations are required to be published in the Negarit Gazette. At the third level of law making, other government entities enact rules to support their day to day operational needs and are known as directives, circulars, notices, or guidelines.

The energy sector in Ethiopia is regulated by Proclamation No. 810/2013 and Regulation No. 447/2019. Mini-grid development and operation is further regulated by the Mini-grid Directive No. 268/2020. Investment in the energy sector is regulated by Investment Proclamation No. 1180/2020 and Investment Regulation No. 474/2020. These proclamations, regulations, and directives set the principles, key definitions, and rules for mini-grid regulation including licensing. These documents should be referenced by mini-grid developers throughout the licensing process.

The following section provides a brief summary of the documents and links to access the full documents.

Proclamation No. 810/2013: A Proclamation on Energy

The energy sector in Ethiopia is regulated in part by Proclamation 810/2013. The proclamation

requires the EEA to be established by regulation and defines the powers and competencies of the EEA.

The proclamation defines important concepts such as "license" and "tariff", Low Voltage (LV), Medium Voltage (MV) and High Voltage (HV) as well as conditions for electricity interruption, land use, and criminal offences and penalties.

Proclamation 810/2013 sets out the rules and parameters of licenses "for the generation, transmission, distribution and sale, importation or exportation of electricity for commercial purposes; or to undertake energy audit, energy efficiency and conservation contracting or consultancy services.

The Proclamation No. 810/2013: A Proclamation on Energy, can be accessed at: https://chilot.files.wordpress.com/2014/09/proclamation-no-810-2013-energy-proclamation.pdf.

Regulation No. 447/2019: The Council of Ministers Energy Regulation

The "Council of Ministers Energy Regulation" No 447/2019 further details the rules for the implementation of Proclamation No 810/2013 and regulates the energy sector. The proclamation introduces important definitions, rights, and processes for obtaining a license to generate, transmit, distribute and sell electricity for a specific project, including: the process for applying for licenses, the rights and obligations of license holders, tariff review process, and the duration of licenses. Some of the key concepts include:

- Definitions of a Certified Person and Certificate of Competency
- Definition of spot market
- Application for (I) generation license, (II) transmission license and (III) distribution and sale license, (IV) importation and exportation of electricity
- Duration of license
- Rights and obligations of licensees
- Principles of electricity tariff and grid access

Regulation No. 447/2019: The Council of Ministers Energy Regulation, can be accessed at: http://eea.gov.et/media/attachments/LAWS%20AND%20REGUALTIONS/Energy%20laws%20and%20regualtions/4energy%20regulation.pdf.

Mini-Grid Directive No. 268/2020

The EEA issued the Mini-Grid Directive No. 268 in December 2020. The Directive is issued by the EEA pursuant to the authority vested in it by Article 40(2) of the Energy proclamation No. 810/2013 Article 81 and Article 3 (8) of the Energy Council of Ministers Regulation No 447 /2019.

The Directive provides specific and detailed rules for the development and operation of mini-grids including licensing procedures, technical standards, quality of service, tariff regulations and related issues pursuant to Energy Regulation No. 447/2019. It is applicable to off grid commercial electrification by the public or private developers with installed capacity of 10MW or below. In particular, "Part Two: Mini-grid License" outlines the rules and processes associated with obtaining a license for a mini-grid.

Investment Proclamation No. 1180/2020

On 2 April 2020, Ethiopia issued Investment Proclamation No. 1180/2020 – a new investment proclamation repealing Investment Proclamation No. 769/2012.[2] The purpose of the proclamation is to improve the investment environment in Ethiopia and further open areas for foreign investment. The proclamation recognizes accelerating economic development across all sectors of the economy requires increasing and enhancing the role of private sector investment and Ethiopia's global competitiveness. The proclamation applies to all investments carried out in Ethiopia, except investments in the prospecting, exploration, and development of minerals and petroleum.[3] The proclamation sets the high-level policy and institutional arrangements.[4]

The proclamation includes nine major parts including:

- Part 1. General, where key definitions are provided, such as investment, enterprise, capital, domestic and foreign investor, among others;
- Part 2. Investment Objectives;
- Part 3. Areas of Investment, Forms of Enterprise, and Capital Requirements, including the minimum capital investments by investment and investor type;
- Part 4. Investment Permit;
- Part 5. Registration of Technology Transfer and Collaboration Agreements with Domestic Investors;
- Part 6. Investment Incentives, Guarantees, Protection, and Facilitation, including a provision on the government's authority to expropriate any investment undertaken under the protection for public interests and remittance of funds;
- Part 7. Grievance Procedures and Settlement of Investment Disputes;
- Part 8. Investment Administration Organs; and
- Part 9. Miscellaneous Provisions.

The proclamation re-establishes the Ethiopian Investment Commission and mandates it to be a one stop service to investors in Ethiopia. The proclamation also delegates authority to the EEA to issue investment permits for the generation or transmission or distribution of electric power.

The Investment Proclamation No. 1180/2020 can be accessed at: https://investmentpolicy.unctad.org/investment-laws/laws/318/ethiopia-investment-proclamation-no1180-2020.

Investment Regulation No. 474/2020

The Investment Regulation No. 474/2020 was issued on 7 September 2020, and provides the rules for the implementation of the Investment Proclamation No. 1180/2020. The regulation details a list of investment sectors that are prohibited or restricted to foreign investment under the following three categories:

[2] BonellieErede Ethiopia. (2020). *Investment Proclamation No. 1180/2020,* pp. 1. Retrieved from: http://unidoseoul.org/en/files/2020/06/BE-Ethiopia_Investment-Proclamation-1180-2020.pdf.
[3] Orbitax. (2020). *Ethiopia Publishes New Investment Proclamation to Improve Investment Environment.* Retrieved from: https://www.orbitax.com/news/archive.php/Ethiopia-Publishes-New-Investm-41790.
[4] BonellieErede Ethiopia. (2020). *Investment Proclamation No. 1180/2020,* pp. 1.

1. Investment areas reserved for joint investment with the government (5 investment areas);
2. Investment areas reserved for domestic investors (32 investment areas); and
3. Investment areas reserved for joint investment with domestic and foreign investors (7 investment areas, including 49% maximum holding by foreign investors).[5]

One of the five investment areas reserved for joint investment with the government is "import and export of electrical energy." One of the 32 investment areas reserved for domestic investment is transmission, and distribution of electrical energy through integrated national grid system.[6]

All other areas not reserved in one of the above three categories are open to foreign investors without restriction – this includes off-grid mini-grid development. The regulation also details the steps and documents required for applying for and obtaining investment permits, and rules for entering into a joint investment with a domestic or foreign investor, the acquisition of existing enterprises by foreign investors, the transfer of investment projects, the registration of technology transfer agreements and collaboration agreements, and the minimum requirements for training and the transfer of knowledge and skills to Ethiopian employees.[7]

The Investment Regulation No. 474/2020 can be accessed at:
http://www.eea.gov.et/media/attachments/2020/09/10/investment-regulation-no.-4742020.pdf

1.4 Key Stakeholders for Mini-Grid Developers in Mini-Grid Licensing

The key stakeholders that a mini-grid developer needs to interact with in Ethiopia while licensing a mini-grid project are:

- **Ministry of Water, Irrigation and Electricity (MoWIE)**. MoWIE currently acts as a coordinator on the rural electrification projects and programs.
- **Ethiopian Energy Authority (EEA)**. EEA is the main government entity mandated to regulate and license mini-grids as per the 810/2013 Energy Proclamation. EEA or the Authority is the main point of contact for mini-grid developers that license a project.
- **Ethiopian Electric Utility (EEU)**. EEU has the mandate to extend the national grid into rural areas and is also operating and constructing mini-grids.

[5] Africa Legal Network. (2020). *Update on Ethiopia's New Investment Regulation No. 474/2020.* Retrieved from: https://www.africalegalnetwork.com/update-new-investment-regulation-no-474-2020/.

[6] Orbitax. (2020). *Ethiopia Publishes New Investment Regulation.* Retrieved from:

https://www.orbitax.com/news/archive.php/Ethiopia-Publishes-New-Investm-43628.

[7] Ibid.

See Figure 1 for a guide of how these agencies are organized and interact with each other:

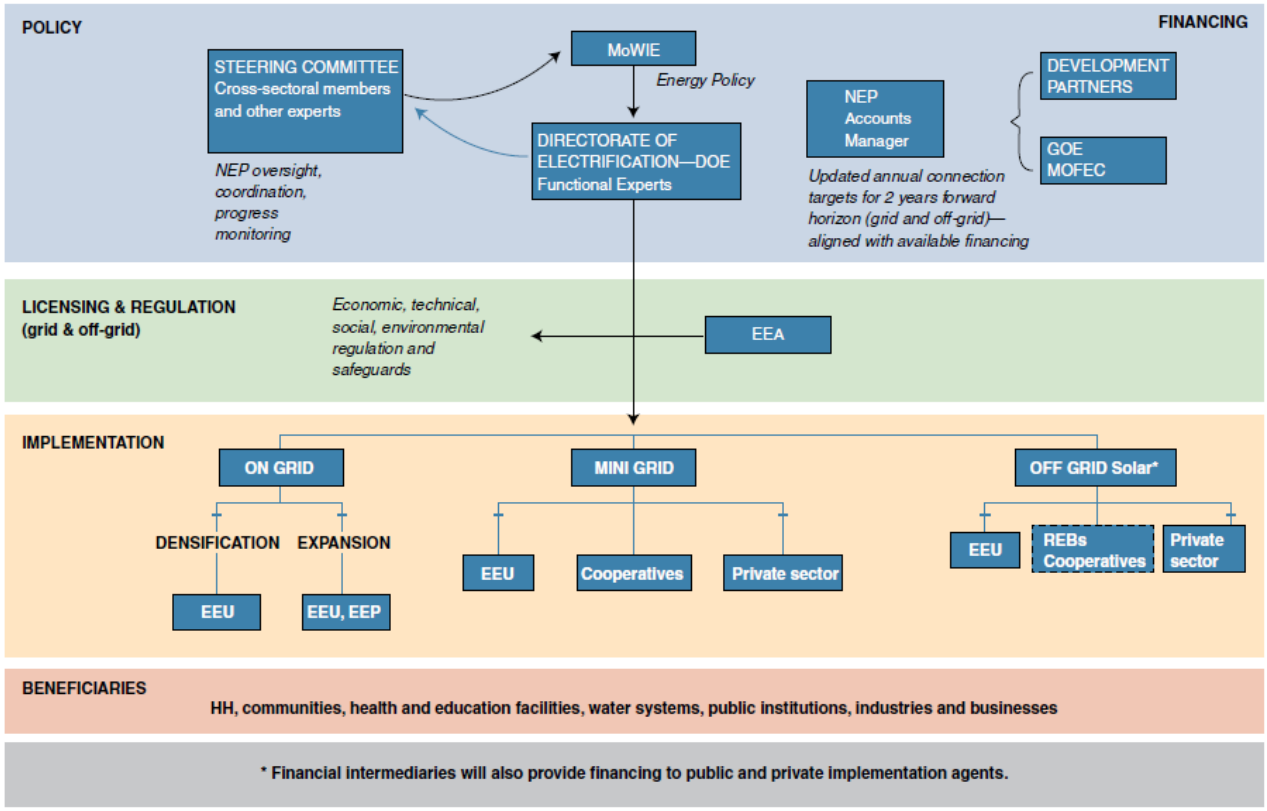

Figure 1: NEP Implementation Framework

Key steps and approvals that a developer must follow and obtain from project inception to design, build, and operation are summarized in Figure 2 below. They are discussed in more detail throughout this document.

2 Key Approvals and Steps

Figure 2: Summary of Key Approvals and Steps

KEY STEP	•Additional information
1. Registration of Site Scoping Visit	•Developers submit letter to EEA/MoWIE; this step is not mandatory but highly recommended.
2. Carry Out Feasibility Study	•Feasibility study is mandatory and should at least include a rural energy demand and supply assessment
3. Conduct an ESIA	•Developers must submit an Environmental Authorization and an Environmental Management Plan.
4. Determine Licensing Requirements per Mini-grid Type and Class	•Class I, mini-grids below 50kW •Class II, mini-grids between 50 and 200kW •Class III, mini-grids between 200kW and 10MW
5. Obtain a Land Conveyance and Land Use Permit	•Developers must obtain a Land Use Permit and copies of Lease Agreements for project sites.
6. Obtain a Commercial Registration Certificate	•Application must be signed by an attorney and obtained at least two months before operation begins.
7. Obtain an Investment Permit	•Investment Permit requirements are different between domestic and international investors; this step also includes a written letter to the Ethiopian Revenue and Customs Authority.
8. Obtain Customer Agreement	•Customer agreements can be obtained through an MoU or support letter from the community and/or local authorities.
9. Prepare a Tariff Proposal	•While preparing the tariff proposal, developers have to consider the applicable tariff principles, methodology, timelines and requirements.
10. Announce Project via National Avenue	•Announcements must be made in a newspaper or other widely circulated mass media outllet with nationwide circulation.
11. Obtain Trade Registration Certificate from Ministry of Trade	•Trade Registration Certificate from Ministry of Trade can be obtained after Investment Permit.
12. Obtain Permit to Construct	•Permit to construct requires a construction plan (including a work schedule) and a Health and Safety Plan.
13. Apply for a License for Commercial Activities in the Electricity Supply Industry	•Applicaton process and exhibits are different depending on mini-grid Class (I, II or III)
14. Import Equipment and Install Infrastructure	•Developers must adhere to installation requirements and navigate rules for importing equipment.
15. Other Requirements	•Additional requirements

8

[8] Notes that Key Step 11 is not mandated by law.

2.1 Registration of Site Scoping Visit

This initial step is not strictly mandatory, but is common practice and highly recommended. A mini-grid developer that has conducted a desktop scoping study on potential sites for mini-grids and intends to visit one or more of those sites is strongly encouraged to **register its intention through a simple letter.** The letter should state the planned locations, intended dates of visits, and the purpose of the scoping visits. It should be addressed to EEA and, or MoWIE but will not require a formal response. This registration letter informs key stakeholders of the developer's intentions and allows for coordination between different electrification programs and initiatives.

If the developer has not yet identified sites, it could **request a list of sites that have been allocated and are available for a given region** through a letter to MoWIE or the Bureau of Water, Irrigation and Energy (BoWIE).

During the logistics organization of the site visits, mini-grid developers are strongly encouraged to **coordinate their visit with relevant state, local and village leaders through phone calls**, to ensure the village has the opportunity to prepare for their visit.

2.2 Carry Out Feasibility Study

A feasibility study is a common and necessary step in the development of a mini-grid project. The feasibility study provides written evidence of the viability of a technological solution (i.e. mini-grids) to provide or improve electricity in a given location at both the technical and economic levels. The Mini-grid Directive No. 268/2020 mentions the feasibility study as a requirement, however the directive does not provides further details or guidelines on the required content and methodology for an appropriate feasibility study.

The information collected and analysis performed during the feasibility study is used in further steps along the process, such as the intended tariff (as per Part III, the Mini-Grid Tariff Methodology and Guidelines of the Directive and outlined in step 9), the intended customer agreement (step 8) and determination of the type of electricity license based on the plant size (step 4).

At a minimum, the developer should complete a **rural energy demand and supply assessment** at the woreda level to evaluate project feasibility.

For more information on the requirements for carrying out the feasibility study please reference Mini-grid Directive No 268/2020 Appendix 2 – Procedure and Requirements for Obtaining License, Part 2 – List of Exhibits in Support of Application, Exhibit A9 – Feasibility Report. P. 71.

2.3 Conduct an Environmental and Social Impact Assessment

The Mini-grid Directive No. 268/2020 includes rules on environmental and social studies. Part Two: Mini-Grid License, Section 12. Special Requirements (1) states that "all applications for Generation or Distribution Electricity License shall be accompanied by Environmental clearance certification secured from Environment Forest and Climate Change Commission or its delegated entity." Section 12, Special Requirement (2) also specifies that if a planned hydroelectric project exceeds 50 kW, an application for the project "shall be supported by a development License or consent to be issued by the Ministry of Water Irrigation and Energy."

Appendix 2 – Procedure and Requirements for Obtaining License, Part 2 – List of Exhibits in Support of Application, Exhibit A18 - Environmental Authorization and Environmental Plan (Per the environmental law) requires applicants to provide an Environmental Impact Assessment, and Environmental Authorization Certificate from the Environment Forest and Climate Change Commission or its designated Institutions (for mini-grid projects, MOWIE) and an Environmental Management Plan which complies with the requirements of the prevailing environmental policies and legislation of Ethiopia.

In the case of a distribution and sales license, the developer shall convene a community meeting with attendance by the potential customers in the community that will be served by the off-grid distribution and/or generation system, and upon favorable agreement by at least 75% of the attendees in the community meeting, which shall comprise of at least ten community members , the Community Electricity Committee (CEC) leader and project developer or representative shall countersign the exclusivity agreement per the template provided in Appendix 4 of the Mini-grid Directive No. 268/2020.

Developers must conduct an Environmental and Social Impact Assessment (ESIA) under the MoWIE and the Environment and Forest Commission. This addresses the impacts and management of the following (at a minimum):

- Biological resources, including wildlife
- Paleontological resources
- Ground disturbance and ground water quality degradation
- Cultural and historical resources

To obtain a license to operate, developers must also submit the following:

- **Environmental Authorization** from the Environment and Climate Change directorate of MoWIE.
- **Environmental Management Plan** summarizing the requirements of the assessment above and including a strategy for avoiding, mitigating, or compensating for any negative impacts identified in the ESIA.

For more information on the requirements for carrying out the required environmental and social assessments reference Mini-grid Directive No. 268/2020 Appendix 2 – Procedure and Requirements for Obtaining License, Part 2 – List of Exhibits in Support of Application, Exhibit A18.

2.4 Licensing Requirements per Mini-grid Type and Class

The Mini-grid Directive No. 268/ 2020 defines **two types** of licenses:

a) Generation license; and

b) Distribution and Sales license, and outlines the licensing requirements for mini-grids.

The requirements for a license are further delineated by the **class** of mini-grid as detailed in Part Two: Mini-grid License. The licensing requirements are different for each mini-grid class. The three mini-grid classes include:

Table 2. Mini-grid Licensing Requirements

	Class I	Class II	Class III
Capacity threshold	<50kW	>50kW to 200kW<	>200kW up to 10MW
Tariff Regulation	None, tariffs negotiated with Electrified Community	None, but tariff computation is submitted to EEA in case electrified community formally complains EEA endorses submitted rate structure along with the signed contracts	Tariff computation submitted to EEA for review and approval Full scale tariff review every 4 years
Public hearings	Not required	Not required	Required
Timeframe	License should be issued 10 days after applicant has submitted valid agreements and requirements and after public notice if accepted by EEA	License should be issued 10 days after applicant has submitted valid agreements and requirements and after public notice if accepted by EEA	Once a valid agreement and requirements per this directive is presented to the Authority complying with all the requirements, and tariff review per provisions in part three is completed and rates are approved by the Authority, License shall be provided to the applicant within 60 days

All three classes of mini-grid license class are site-specific and shall be obtained for each market activity. A site-specific License may cover more than one site per License in which case the cumulative capacity determines the license class.

Consolidated Licensing Process

Section 8 of the Mini-grid Directive No. 268/2020 introduces the consolidated licensing process and indicates that consolidated licensees shall have the same rights and obligations as the Licensee which has obtained Generation, Distribution and Sale License under a single licensing process.

Required Exhibits in Support of a License Application by Class

There are twenty-nine (29) exhibits or requirements that are listed under the Appendix 2 - "Procedure and Requirement for Obtaining License" that detail all 29 exhibits that need to be submitted to EEA in support of a license application. Some exhibits do not apply for Class I. See Table 4 for a detailed overview of which exhibits are required for the different classes.

Micro-Hydro Projects

The directive introduces the case of micro-hydro licensing applications. For this, micro-hydro above 50 kW (**mini-grid Class II and III**) an application for the project shall be supported by a development License or consent to be issued by the Ministry of Water Irrigation and Energy.

2.5 Obtain a Land Conveyance and Land Use Permit

In order to apply for a license to operate, developers must first obtain a **land use and land planning permit**. Alternatively, a **proof of land lease** with three copies of the site plan may be submitted for a license to operate.

- **Land Use Permits** must be acquired by the developer from the Regional State, and should include:
    - Any **Right of Ways**
    - Specific **plot coordinates**

Alternatively, Regional State approval could be replaced by approval from the community (kebele) and district (woreda). Per the Rural Land Administration and Land Use Proclamation No. 456/2005, a **competent authority** in this case is defined as "a body established in accordance with the constitution of a region to ensure that a system of rural land administration and utilization is realized in region."

- **Lease Agreements** must include three copies of the site plan.

For more information review the following document: Rural Land Administration and Land Use Proclamation No. 456/2005.

2.6 Obtain a Commercial Registration Certificate

Mini-grid developers are required to obtain a commercial registration certificate prior to initiating operations. **Developers must collect the certificate from the Licensing and Registration Department at least two months before operations begin (**Mini-grid Directive No. 268 /2020, Exhibit A2)**.** Foreign investors are required to register either with the Ministry or with the Ethiopian Investment Agency. It is also important to note that registrants are only required to register once at the location of their head office, even if they will be working in multiple regions or locations. The applicant must also verify with the registering office that there is no other commercial business with the same name. Additionally, all required documents must be signed in person at the Document Authentication and Registration Agency.

Required documents to receive the certificate are:

- **Application Signed by an Attorney:** Power of attorney must be given by all partners or shareholders of the project development company. This application must include the following documents.
    - **Identification:** The registration must include photocopies of a valid passport or kebele identification card of both the manager and the attorney. In addition, the manager must include passport size photographs of themselves that are taken within six months of the registration.
    - **Articles of association:** If the registrant or members of their business is a foreign national they must provide documenting evidence that foreign nationals are considered domestic investors.

  - **Proof** that the registration is unlikely to create conflict with the interest of another businessperson.
  - **The permanent address** of the office of the applicant.
- The registrant must also submit a bank statement demonstrating that the capital of the business that will be contributed in cash has already been deposited. This statement may also include any in-kind contributions.
- Registrants can review requirements and send in online applications via an online portal[9].

For more information on commercial registration certification see: Commercial Code Proclamation No. 166 of 1960: http://hrlibrary.umn.edu/research/Commercial%20Code%20(English).pdf , and Proclamation 686: http://www.motin.gov.et/-/proclamation-no-686-2010-commercial-registration-and-business-licensing-proclamation?inheritRedirect=true.
Commercial Registration and Licensing Proclamation No. 980/2016 : https://chilot.me/wp-content/uploads/2017/04/proclamation-no-980_2016-commercial-registration-and-licensing.pdf

2.7 Obtain an Investment Permit

Prior to applying for a license to operate, developers must present proof of an Investment Permit from the Ethiopian Investment Commission (EIC).

- Developers may collect the Investment Permit application form from www.investethiopia.gov.et, or from the EEA
- The EIC has given the EEA the authority to distribute and approve Investment Permits for mini-grid developers.

The investment permits must be renewed annually until the investor begins marketing their products or services. There is no need to renew an investment permit once a license is issued by EEA.[10]

An investment permit can be revoked if an investor fails to begin implementation of their project within two years of issuance of the permit or has delayed the completion of the project by two years from the time that will be agreed with the appropriate investment organ. The appropriate investment organ may renew the permit if it is convinced there is sufficient cause for the delay.[11]

Investment Permit application requirements differ between **domestic**, **foreign, and joint investors**. Requirements for all investors are summarized in Table 3 below.

Table 3. Investment Permit Requirements

Investor Type	Specific Requirements
All Investors	• Where the application is filled out by an agent, a photocopy of the agent's power of attorney • Where the application is filled out by a non-Ethiopian agent, photocopies of the agent's passport and two recent passport photo size photographs

[9] https://www.eservices.gov.et/business/need/946b03bf-ee08-47c8-9a28-c86129175782
[10] Federal Negarit Gazette of Ethiopia. *Investment Proclamation No. 1180/2020, Part IV, Investment Permit, Section 11 "Renewal of Investment Permit*".
[11] Ibid.

Investor Type	Specific Requirements
Domestic Investors Only **Foreign Investors Only** **Joint Investors Only**	• An investment application form signed by the agent of the business organization, or in the case of joint investments, an agent of the joint company • A photocopy of memorandum and articles of association of the business organization • Photocopies of certificates evidencing their domestic investor status or photocopies of their identity cards • If the investment is to be made by an **Ethiopian business organization**: Photocopies of each associate's passport, and two recent passport photo size photographs of the general manager of the business organization • If the investment is to be made by a **branch of a foreign business organization in Ethiopia:** A photocopy of its memorandum of association and articles of association or a similar document of the parent company, a copy of identity documents and two recent passport photo size photographs of the Ethiopian branch manager, and a copy of the document from parent business organization authorizing a branch in Ethiopia • If the investment is to be made by a **sole proprietor**, a copy of their passport and two recent passport photo size photographs • Minimum capital requirement is **200,000 USD** (100,000 USD if the investment is architectural or engineering work or related technical consultancy services, technical testing and analysis, or in publishing) • Photocopies of the memorandum of association and articles of association of such joint company; • Photocopies of the foreign investors' passport(s) and two recent passport photo size photographs • Minimum capital requirement is **150,000 USD** (50,000 USD if it is architectural or engineering work or related technical consultancy services, technical testing and analysis, or in publishing)

After submitting an Investment Permit application:

- **EEA may approve** an Investment Permit upon receipt of the **appropriate fee.**[12]
- After obtaining the permit, the developer may work with EEA to have a letter written to the **Ethiopian Revenue and Customs Authority**, which shall include a full list of all supplies expected to be imported into the country.
- Submission of an Investment Permit to the Ethiopian Revenue and Customers Authority via a letter from EEA may **provide developers with value-added tax (VAT) exemption for 3 years.**

For more information on Investment Permitting, see: http://www.investethiopia.gov.et/investment-process/starting-a-business.

[12] If the permit is not approved, the applicant will receive written reasons for rejection within three working days of the decision.

2.8 Obtain a Customer Agreement

The mini-grid developer must obtain a signed agreement with the community outlining the intended mini-grid project, the energy service, technical service minimum standard and rate structure, including associated fees or charges to be billed to the community using appendix 4 available in the Mini-grid Directive No. 268/2020. This agreement could take the following forms:

- **Memorandum of Understanding** (MoU) that details the agreement between the community (or its representatives), the mini-grid developer, and any other party (such as a local authority, or anchor load); or
- **Regional registration or support letter.**

This can typically happen in the developer's second or later visit to the community, once a strong relationship has been established. During this visit, customers can also sign up for services to limit risk for the developer.

For more information, see Energy Regulation No. 447, Mini-grid Directive No. 268/2020, Part II Section 2 and Appendix 4.

2.9 Prepare a Tariff Proposal

Off-grid tariff regulation is ruled and guided by the 447/2019 Energy Regulation and the Mini-grid Directive No. 268/2020. Therefore, in preparing a tariff proposal developers should align with these two documents. This section summarizes the most important aspects, principles and formulas for mini-grid developers.

Cost Reflective Tariffs

Regulation No. 447/2019 states that **cost-reflective tariffs are allowed in off-grid projects in Ethiopia** in the general principles section of the regulation, and the section "MINI GRID TARIFF METHODOLOGY AND GUIDELINE" of the Mini-grid Directive No. 268/2020 sets the guidelines and methodology to support the determination of transparent off-grid tariffs.

The Mini-grid Directive No. 268/2020 states that fixed charge/ connection charges shall be developed apart from retail energy tariffs and power tariffs. Moreover, all costs, local and international, covered by **subsidy, cross-subsidy or grants may not be reflected in the applicant's cost** of business operations).

In addition to the above, as stated under the directive document in Article 28, section 3, for all cases of subsidy finance or cross subsidy, rural households are charged a tariff not exceeding the national average end-use tariff up to a consumption of 1kWh per week. For any consumption beyond 1kWh, they may be charged the tariff calculated utilizing the tariff determination methodology.

Tariff Methodology

The directive defines 2 main costs to be regulated:

- Local generation
- Mini distribution grid, including retail cost

Table 4. Tariff Methodology Formulas

Cost	Revenue Requirements formula	Retail Off-Grid Tariff	Off-grid Retail Tariff (ORT)
Local generation	$RR_{OG,i} = (RAB_{OG,i} \times WACC) + O\&M_i + Dep_i + Taxes_t$	OGT = Off-grid Generation Tariff	ORT = OGT + ODT
Mini distribution grid, including retail cost	$DRR_{OG} = (WACC \times RAB) + O\&M_i + Depr_i + Losses_i + CSCi_t + Taxes$	ODT = Off-grid distribution tariff	

A computation guideline for the Weighted Average Cost of Capital (WACC) is also provided as an Annex to these guidelines.

Requirements for the developer to submit a tariff application

There is an application form in English that mini-grid developers need to fill in for the tariff application (Appendix 6, Mini-grid Directive No. 268/2020).

Mini-grid Directive No. 268/2020 stipulates that **mini-grid Class I** developers shall negotiate tariffs and other charges directly with the Electrified Community independent of tariff regulation. Developers then submit the agreement along with the Application for License, using the forms in the Directive's Appendix 1. **Mini-grid Class II** developers also negotiate directly with communities, but the terms of their agreement must fall within tariff methodology guidelines.

Under the same document, the Authority considers **mini-grid Class III** having to submit a tariff computation along with the License application using forms as in Appendixes 6 and 7, based on part three of the Mini-grid Directive for a full scale tariff review.

Tariff application review process

In reviewing and recommending mini-grid related tariffs, following the 447/2019 the EEA may consider the following costs:

- Cost of fuel;
- Cost of power purchase;
- The rate of inflation or deflation; and
- Foreign currency fluctuation.

A number of reasons are cited by the Authority within the Mini-grid Directive No. 268/2020 as for conveying a tariff review. This review can be undertaken before issuing the license and subsequent implementation of rate revision, and after issuing the license.

All tariff study and tariff review of all rate applications made shall be based on the Mini-grid Directive No. 268/2020 and subsequent tariff tools and guidelines to be issued here under in a directive.

For **mini-grid Class III**, where the service is to be subsidized, such subsidy has to be based on the guideline on effective subsidy scheme as in Appendix 8 (also found in the Mini-grid Directive No. 268/2020 document).

In addition to the above, and also for **mini-grid Class III**, a summary of steps shall be followed in tariff review and approval (Mini-grid Directive No. 268/2020). The steps are well explained in the Appendix 7 of the same document. One of the steps includes holding public hearings, where the applicant must respond to issues raised by stakeholders on tariff proposals. The applicant may be requested by EEA to disseminate the tariff proposals to the public and customers using appropriate media accessible to the customers and the local community at least 10 days before the public hearings. The findings from the tariff analysis will be summarized following the Appendix 6 (Mini-grid Directive No. 268/2020).

Appendix 7 of the Mini-grid Directive includes a very useful flowchart for tariff review and approval process and handy for future applicants.

Tariff application timelines

Within 30 days of receipt, the EEA must approve or reject the tariff application. Prior to rejection, the applicant must be given an opportunity to be heard by the EEA. If rejected, the reasons for rejection must be recorded.

Tariff principles as per Regulation No. 447/2019

Tariff principles upon which the application may depend are defined in Regulation No. 447/2019, some of them are factors that encourage competition and efficiency, safeguarding customers' interest and the promotion of co-generation and generation of electricity from RE sources.

For more information, see Regulation 447/2019 and the Mini-grid Directive No. 268/2020 Part III Mini-grid Tariff Methodology and Guidelines and Appendices.

2.10 Announce Project via National Avenue

Prior to issuing the license, the EEA must publish the project in a newspaper or other widely circulated mass media outlet with nationwide circulation. The applicant is required to pay for the expense of publication. The public announcement must include:

- the application;
- details on the possibility of inspecting the application; and
- any person alleging potential damage due to the requested license (if an objection is lodged, there must be a negotiated agreement with the objector).

For more information, see Energy Regulation No. 447, Mini-grid Directive No. 268/2020 and https://www.mtalawoffice.com/legal-updates/entry/new-developments-in-energy-regulations.

2.11 Obtain Trade Registration Certificate from Ministry of Trade

Developers may be required to obtain a trade registration certificate from Ministry of Trade, after obtaining the Investment Permit. This trade registration certificate will be necessary for next steps for aspects such as the importation of equipment into the country, where a VAT and TIN certificate will be required to pass customs.

2.12 Obtain Permit to Construct

Prior to starting construction, the mini-grid developer should obtain an authorization from EEA to begin any works on the intended sites or locations. In addition to the documentation that the developer has submitted to the Authority, a construction plan, construction timeline (schedule) and a Health and Safety Plan needs to be submitted to EEA.

The Mini-grid Directive No. 268/2020 considers that applicants shall indicate in its Operations and Management Plan whether they intend to operate the plant themselves or engage the services of an operation and maintenance contractor. If the applicant intends to operate the plant itself, the applicant will have to provide to the Authority evidence of its capability in operating the Supply Facility in relation to the License sought. If the applicant intents to subcontract operations, the applicant shall upon request, provide the Authority with the following information:

- Commissioning of plant and equipment;
- Plant maintenance;
- Shut down support services; and
- The written testimony of at least 2 clients attesting to the fact that the proposed operations and management contractor has provided such services.

For more information see Mini-grid Directive No. 268/2020, Exhibit A22 and Appendix 4.

2.13 Apply for a License for Commercial Activities in the Electricity Supply Industry (Generation or Distribution and Sales license)

Pursuant to Proclamation No. 810/2013 and Mini-grid Directive No. 268/2020, developers must apply directly to the EEA to undergo commercial activity in the a) generation, or b) distribution and sale of electricity. **A separate license must be obtained for each commercial activity, nonetheless under the consolidated licensing process for a generation, distribution and sales license may be issued under the same application process as per clause 8 of the Mini-grid Directive No. 268/2020.**

Applications must include a written cover letter to the License Form, directed to the Director General of the Authority. Application forms must be signed by a Principal Officer of the applicant's entity. All applicants should submit 3 copies of the following exhibits as separate attachments, clearly labeled with pages sequentially numbered:

Table 5. Mini-Grid Directive No. 268/ 2020 Exhibits

Exhibit No. In Mini-Grid Directive No. 268/2020	Exhibit Requirements	Class I (<50kW)	Class II (50kW-200kW)	Class III (>200kW)
A1	Describe scope of operation	☐	☐	☐
A2	Provide evidence of registration (i.e. Commercial Registration Certificate, Power of Attorney)	☐	☐	☐
A3	Provide information on principal officers, directors, partners/shareholders	☐	☐	☐
A4	Describe ownership and corporate structure		☐	☐
A5	Describe cases of cross-ownership and ring-fencing		☐	☐
A6	Disclosure of liabilities and investigations	☐	☐	☐
A7	Provide financial capability information, proposed financial plan and financial model	☐	☐	☐
A8	List and describe technical specification of plants, equipment, and type of engineering design	☐	☐	☐
A9	Provide a feasibility report	☐	☐	☐
A10	Describe proposed business plan	☐	☐	☐
A11	Describe organizational history and existing activities	☐	☐	☐
A12	Provide information on any industry participation in the electricity supply industry, reasons for participating in the Ethiopian electricity industry, and other relevant activities			☐
A13	Provide summary of operational experience and expertise	☐	☐	☐
A14	Provide details on plant technology	☐	☐	☐
A15	Note any confidentiality requests on information submitted for regulator to decide on	☐	☐	☐
A16	Provide site analysis details and reports	☐	☐	☐
A17	Provide evidence of a land use permit	☐	☐	☐
A18	Provide evidence of environmental authorization and an environmental plan	☐	☐	☐
A19	Provide public health and safety plan	☐	☐	☐
A20	If applicable, provide special licenses required	☐	☐	☐

Exhibit No. In Mini-Grid Directive No. 268/2020	Exhibit Requirements	Class I (<50kW)	Class II (50kW-200kW)	Class III (>200kW)
	for hydro and geothermal project (Water Use License, Development Permit, Exploration and Drilling License…etc.)			
A21	Provide detailed site layout and drawings	☐	☐	☐
A22	Provide copies of all implementation agreement and permits	☐	☐	☐
A23	Provide a detailed implementation schedule with clear milestones and timelines	☐	☐	☐
A24	Provide detailed plant and machinery specifications on engineering design and equipment	☐	☐	☐
A25	Provide details on supply agreements for fuel, water, and electricity during construction	☐	☐	☐
	Requirements for Existing Facilities or Before Commencement of Operations			
A26	Provide safety and technical management plan		☐	☐
A27	Provide commissioning report and decommissioning plan		☐	☐
A28	Provide as-built drawings and plant layout	☐	☐	☐
A29	Summarize safety compliance on supply system installations	☐	☐	☐

In addition to the above, and only for **micro-hydro above 50 kW (mini-grid Class II and III)**, the developers will need a development License or consent to be issued by the Ministry of Water Irrigation and Energy.

Generation Applications and **Distribution and Sales Applications** should include the following:

Generation Applications	Distribution and Sales Applications
• Generating Plant Technology and Description • Electricity source • Map of the project site • Local generation capacity of the project in measured units • The distribution grid or supply network details to which it shall be connected or whether it operates on an off-grid basis • Proposed license term (up to 20 years) • Prior to commissioning, the following should be fulfilled: ○ approved power purchase agreement where	• Agreements and permits granting rights of way • The applicable permits relating to railroads and highways • Agreement for the common use of facilities where necessary • Model transmission service agreement including terms for wheeling electrical power • Route map and operation area of the distribution network

Generation Applications	Distribution and Sales Applications
appropriate o where applicable, project finance agreement o environmental impact assessment clearance certification o trade registration certificate o taxpayers' identification number o land use permit o water use permit o construction permit	• Exact limit of the distribution network • The transmission network to which it may be connected or the source of electricity • Power purchase agreement as appropriate • Environmental impact assessment • Proposed license term • Distribution service agreement as applicable (under grid encroachment)

For more information, please see Mini-Grid Directive No. 268/2020, Exhibits A1-29.

2.14 Import Equipment and Install Infrastructure

There are a series of requirements for both imports and installations in Ethiopia. The Ethiopian Standards Agency oversees labeling and marking requirements. The Ministry of Trade has the power to limit or restrict imports of commercial goods that do not follow a formal bank payment mechanism. Recent experience in Ethiopia indicates that customs clearance times have decreased over the years and currently vary between 14 and 21 days. Import and installation requirements are summarized in the table below.

Import Requirements (for foreign importers)	Installation Requirements
• **Agency agreement** • **Bank permit** • **Bill of lading or airway bill** • **Certificate of origin** • **Commercial invoices** • **Customs import declaration** • **Foreign exchange authorization** • **Import license** • **Insurance certificate** • **Packing list** • **Tax identification number (TIN) certificate** • **Pre shipment inspection clean report of findings** • **Transit document** • **Value added tax (VAT) Certificate**	• **Conductors:** Uninsulated, and insulated aluminum alloy conductors can be used. • **Solar PV-specific requirements:** o Equipment should be certified to quality and performance assurance standards by a well-known, internationally recognized certified laboratory such as DNV, TÜV or similar. o Solar modules must have a permanent label (legible for 20 years) on the back-sheet stating the following information: ▪ Manufacturer's name ▪ Country of origin ▪ Type and model number ▪ Serial number ▪ Watts peak o The frame must be rigid enough to protect from transport across rough terrain. o Must include lightning surge protection. o Cables should be twin core and color-coded. • **Health and Safety** as per the general electrical works safety code of Ethiopia

For more information, see: https://www.trade.gov/knowledge-product/ethiopia-import-requirements-and-documentation.

2.15 Other Requirements

In addition to all previous requirements, this chapter includes some additional relevant requirements that need to be taken into consideration by the applicants.

The Mini-grid Directive No. 268/2020 considers that the Authority may, where it deems it necessary, demand from an applicant a Corporate Social Responsibility Plan.

In addition to the above, and where the Authority deems it necessary for the performance of the obligations under the License, or upon the advice of a relevant Government Agency, the Authority may demand Performance Guarantee from an applicant.

Applicants will have to issue a fee payment defined by the Energy Regulation and attached in Appendix 5 of the Mini-grid Directive.

For the sale or the transfer of mini-grid assets, the Mini-grid Directive covers some important considerations, including conditions and limitation to it and possible tariff review.

Finally, the Mini-grid Directive includes further detailed in the case of customer and operator rights in the event of mini grid encroachment by the Grid. Additionally, this document also considers the procedure for computation of compensation in the event of off grid/mini grid encroached by the grid.

3 Steps After Having Obtained the License

Energy Regulation 447/2019 defines the rights, obligations, license renewal process and license resale. Any licensee has the following rights and obligations:

Table 6. Summary of Rights and Obligations Granted by License

Rights	Obligations
• Seek approval of investments on its own discretion, • Collect revenues in accordance with approved tariffs • Enter the premises of the customer to undertake electricity supply operations • Disconnect electricity service of customers in accordance with Article 12 of the Proclamation • Examine electric installations of customers	• Carry out electricity supply operations in accordance with the provisions of the Proclamation • Fulfil facilities in accordance with the Grid Code and other related procedures to be issued by the Authority (EEA) • Keep all employment, financial, commercial and other records as well as records of electricity operations for at least 10 years • Submit plans, information and reports as determined in the 447/2019 Regulation • Submit construction plan and report • Submit evidence to the Authority that if has introduced appropriate policies, procedures and management systems for the efficient commercial operation of its business • Take appropriate measures in order to protect human life, property, the environment and natural resources • Not exploit its monopoly position • Seek prior approval from the Authority for all investments that exceed a value to the equivalent of 10% of the regulated asset (unless otherwise agreed to in a power purchase or other agreement approved of or acceded to by the Authority) • Provide appropriate training for its employees • Collect revenue in accordance with the power purchase agreement and approved tariffs • Comply with all notices issued by the Authority • Surrender any revoked license to the Authority within one month

Annex A. Summary of License Fees

Table A-1. Fees for Issuance of Electricity Operation Licenses (per *Mini-grid Directive No. 268/2020, Appendix 5*)

No.	Title	Service Type	Service Fee Amount in Birr
1	Electricity Sector Regulatory Service	-	0.117 per MWH sold energy per year
2	Electricity Operation License Fee	19.Generation/transmission/distribution and sales License application	496
		20.Generation/transmission/distribution and sales License issuance	-
		21. Up to 10 MW	2500
		24. Above 10 MW	6883
		23.Generation/transmission/distribution and sales License renewal, upgrade and transfer	
		Up to 10 MW	1668
		Above 10 MW	4595

Annex B. Captive Power Generation

3.1 Introduction

As EEA continues to develop its regulatory approach towards off-grid systems, it has requested to better understand how other jurisdictions license captive power generation, which typically falls under the category of grid-connected RE power plants.

The purpose of this annex is to provide an example of a light-handed approach to licensing captive power generation and uses the jurisdiction of Kenya to do so. This annex complements EEA's ongoing work on the 2021 draft "Directive for the submission of information to EEA by the non-commercial captive power suppliers".

3.2 What is Captive Power?

Captive power refers to power generation infrastructure that supply power mainly or entirely to one or a limited number of commercial and industrial (C&I) customers rather than a utility.[13] his is often has been a viable and economically attractive option in emerging economies near specific locations that have high power requirements, such as mines, industrial processing facilities, or shopping centers. If the grid is unable to provide stable power to meet the needs of the facilities (i.e., it is an unreliable or weak grid), there may be commercial incentives to develop a captive power plant to provide reliable power. More recently with the decrease in cost of solar power installations, rooftop solar have become the most common form of captive power implementations.[14]

3.3 RE Captive Power licensing requirements

The project cycle of a captive power plant usually involves the following licensing requirements:

➔ EPC and installation requirements

During the Engineering, Procurement, and Construction (EPC) phase, the developer may need to import specific equipment, machinery, and/or supplies and require an equipment import license. In addition, some countries may require an installation license to certify that the personnel assembling the equipment has demonstrated technical expertise and understands safety procedures they need to comply with.

➔ ESIA

An Environmental and Social Impact Assessment (ESIA) may be required if the captive power plant is not a rooftop-based project like solar PV and may have land use and broader community impacts due to its

[13] "Captive power generation – an Africa guide", *Norton Rose Fulbright,* accessed January 19, 2021. https://www.insideafricalaw.com/publications/captive-power-generation.

[14] "A Project Developers' Guide to Utiliate-scale Solar Photovoltaic Power Plants", IFC, pp. 13, accessed February 8, 2021. https://www.ifc.org/wps/wcm/connect/a1b3dbd3-983e-4ee3-a67b-cdc29ef900cb/IFC+Solar+Report_Web+_08+05.pdf?MOD=AJPERES&CVID=kZePDPG

operations. Some countries like Kenya, allow an ESIA exemption if the captive power plant relies on rooftops for generation.

➔ Generation license

If a captive power plant is not connected to the grid or if it is exclusively for self-consumption and the energy is not to be further distributed, it might be exempt from licensing requirement or it may only require a generation license/registration depending on the regulatory approach. Kenya adopts a simplified regulatory approach to captive plants, where plants with less than 1MW of installed capacity and 100% self-consumption do not require any licensing or regulatory approval.[15]

➔ Distribution and sales license

A distribution and sales license may be required if captive supplier also operates distribution lines to service third party off-takers (not 100% self-consumption). In this case, the developer will need to follow procedures for pursuing a distribution and sales license depending on system size.

3.4 General requirements

➔ General electric works licenses applicable in Ethiopia

As with any other energy infrastructure projects, a captive power project will need to comply with, apply and obtain a construction permit or authority form the relevant National Construction Authority. Additionally, the relevant electric work licenses and certifications are required.

➔ General business licenses applicable in Ethiopia

In the current draft directive, EEA has the ability to inquire about proof of competency, including by determining the capability of an applicant to be an operator and considering the competency of an operation and management contractor. However, given that this directive is newly developed and only in draft form, projects should solicit and comply with the most recent guidance provided by the EEA.

[15] "Clean Captive Installations in sub-Sahara Africa", *Frankfurt School- United Nations Environment Programme Collaborating Centre,* pg. 7, accessed January 19, 2021. https://www.captiverenewables-africa.org/wp-content/uploads/2019/12/CCI_Kenya_Final_watermarked.pdf

For questions regarding this publication, please contact
Meghan Riley (mriley@naruc.org)
Erin Hammel (ehammel@naruc.org).

National Association of Regulatory Utility Commissioners (NARUC)
1101 Vermont Ave, NW, Suite 200
Washington, DC 20005 USA
Tel: +1-202-898-2210
www.naruc.org