

Energy Tariffs and Subsidies for Consumers

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Energy Tariff - Legal Frameworks in Ethiopia

● Ethiopian Energy Sector Legal Framework

- ❑ Energy Policy 1994, and Draft Energy Policy 2013
- ❑ Energy Proclamation No. 810/2013 (amendment No.1085/2018)
- ❑ Energy Regulation No. 447/2019
- ❑ Electricity Tariff Setting Methodology and Guideline Directive No.008/2012 (For Grid)
- ❑ Mini-Grid Directive No. 268/2020


Institutional Structure

Entities		Roles
<i>Council of ministers</i>		Approves on-grid tariff
<i>Ministry of Water and Energy</i>		Policy maker
<i>Petroleum and Energy Authority</i>		<ul style="list-style-type: none"> • Regulator/ issue and renew generation, transmission and distribution licenses • Submits on-grid tariff recommendation for the Council of Ministers' approval • Reviews and approves off-grid tariff • Approve electric power purchase and network service agreements (for IPP)
<i>Public Enterprises</i>		Commercial entities and have the status of public enterprises operating on the basis of commercial principles.
	EEP	<ul style="list-style-type: none"> • Responsible for the generation of electricity, • Purchases and sales bulk electric power on transmission lines of over 66 kV level sales
	EEU	<ul style="list-style-type: none"> • Responsible for the operation of distribution lines • Sale of electricity to customers.

● **Tariff Principles**

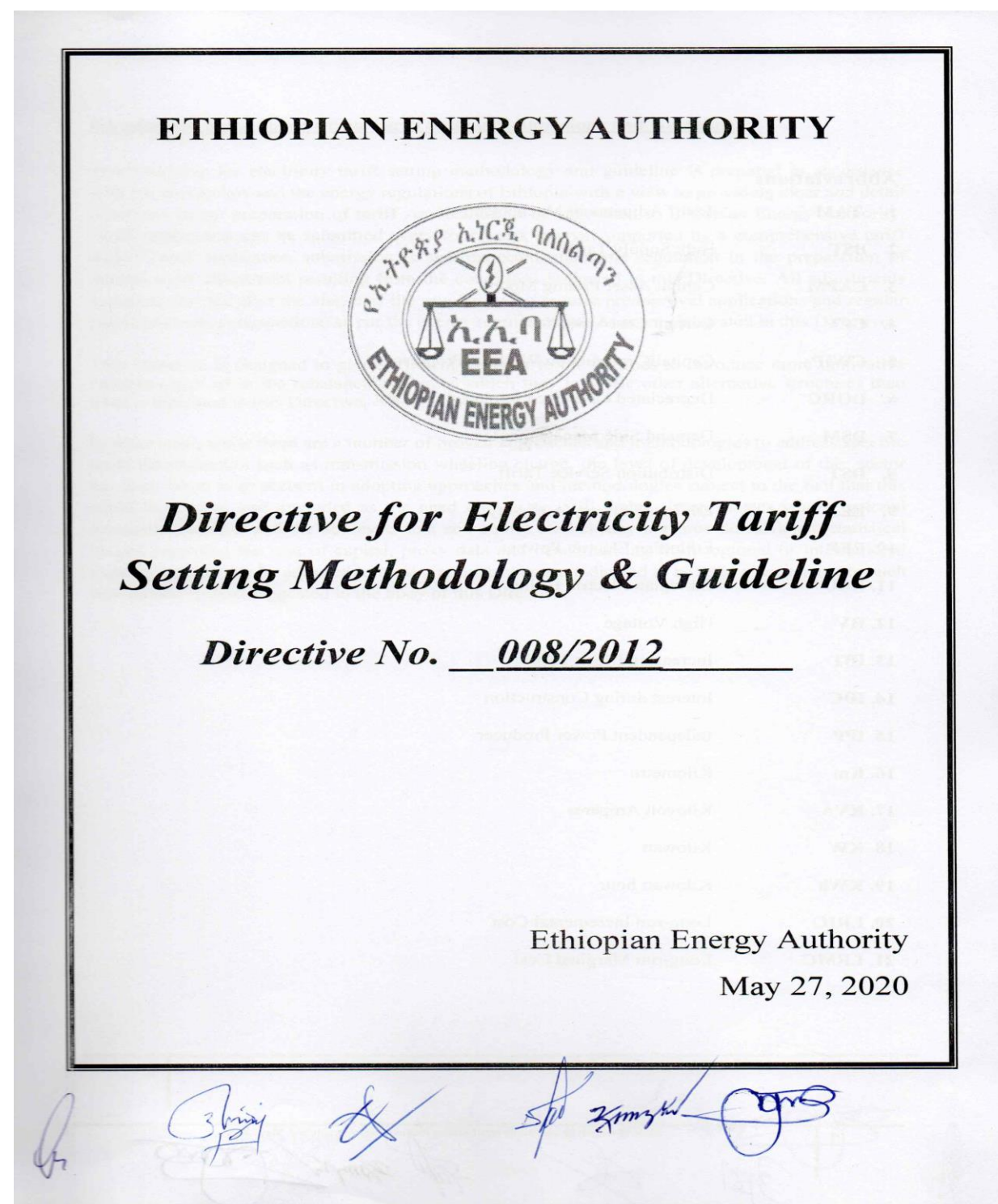
1. Generation, transmission, distribution and sale of electricity is conducted **on the basis of commercial principles and best practice in the sector;**
2. Tariff calculations should **encourage competition, efficiency, economical use of the resource, efficiency in performance, transparency, accommodating the needs of system integrity and attracting investment to the electricity sector;**
3. **Safeguarding customers' interests and at the same time recovering the cost;**
4. Tariff should last at least one year;
5. **Costs covered by subsidy, cross-subsidy or grant shall not be reflected** in the tariff
6. Tariff adjustments shall, to the extent possible, **ensure price stability and simplicity of administration**
7. Allows **cross-subsidy between customer groups**

On-grid Tariff



Ethiopia Electricity Tariff Methodology

Tariff methodology principles



- Cost Reflective
- Financial Viability
- Non-discrimination
- Transparency and Ease of Application
- Correct Price signals
- Elicit Demand Response
- Compatibility with Competition
- Balancing conflicting objectives

Tariff calculation and Review

The following parameters will be taken into consideration.

Calculations	Review*
<ul style="list-style-type: none"> • Regulatory Asset Base • Working Capital Allowance • Regulatory Depreciation • Operating and Maintenance, Expenses • Cost of Capital • Taxes • Capital Works-In-Progress 	<ul style="list-style-type: none"> • Cost of fuel • Cost of power purchase • Rate of inflation/deflation • Foreign currency fluctuation

*Review takes place every four years

Costs by function and Classification

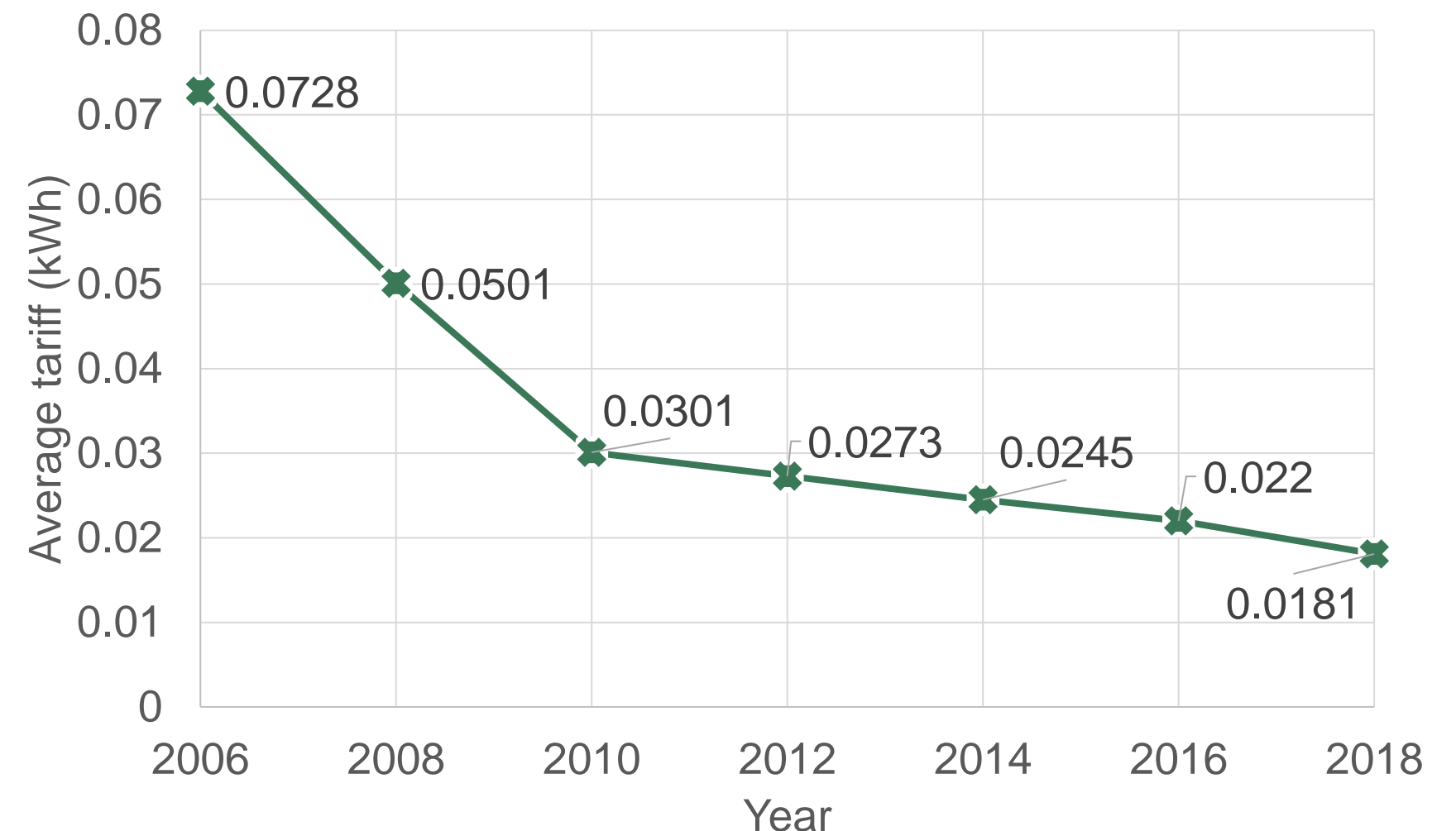
Function	Demand related	Energy-related	Customer related
Generation	X	X	
Transmission	X		
Distribution	X	X	X
Customer service			X



Tariff History

Ethiopia Electricity Tariff Background

- Electricity tariff revision in Ethiopia is infrequent
- From 1952 – 1994 (only four revisions (1964, 1971, 1978, and 1986))
- In 1994, a five-year tariff adjustment package was proposed and planned to set the average tariff at USD 0.06 per kWh
- In 2006, EEPCO adjusted the tariff to USD 0.07 per kWh. Due to devaluation by 2018, the tariff reached USD 0.0181 per kWh.
- In 2018, the average tariff was readjusted to Birr 2 per kWh (0.07 USD per kWh*). Due to the devaluation of Birr against USD, the average electricity tariff is currently 0.03 USD per kWh**

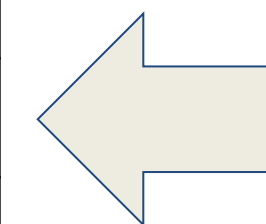


* 1 USD= 28.16 Birr

** 1 USD= 54.7 Birr

Residential Consumer Class (current)

Tariff Category	kWh/month	Birr/kwh
Residential tariff block		
1.1 1st block	Up to 50 kWh	0.273
1.2 2nd block	Up to 100 kWh	0.767
1.3 3rd block	Up to 200 kWh	1.625
1.4 4th block	Up to 300 kWh	2.000
1.5 5th block	Up to 400 kWh	2.200
1.6 6th block	Up to 500 kWh	2.405
1.7 7th block	Above 500 kWh	2.481



Cost reflective tariff

Block Categories 1 – 3 are cross-subsidized by higher consumer blocks Category 5 – 7

● Commercial and Industrial Class (current)

Tariff Category	Demand Charge rate (Birr/kW)	Flat rate (Birr/kwh)
Commercial		2.124
Low Voltage Industry Tariff	200	1.531
Medium Voltage Industry Tariff. 15kv & 33kv	147.54	1.193
High Voltage Industry Tariff. Above 66kv	87.64	0.928
Street Light Tariff		2.124
Bulk Supply Tariff	157.16	0.887

Off-grid Tariff

Off-grid Tariff Determination

Retail tariff = Generation Tariff + Distribution Tariff

Tariff Category	Generation tariff	Distribution tariff
<i>CAPEX*</i>	X	X
<i>Weighted Average Cost of Capital (WACC)</i>	X	X
<i>Operations and Maintenance (O&M)</i>	X	X
<i>Depreciation</i>	X	X
<i>30% Tax</i>	X	X
<i>Customer service costs</i>		X
<i>Inflation</i>	X	X

*** Without grants or subsidies**

● Off-grid tariff approval process

There are different classes of Mini-grids with different licensing requirements as shown in the table below:

Class	Installed Capacity	Tariff methodology
Class 1	Up to 50 kW	The tariff is directly negotiated with the community without the intervention of regulatory bodies
Class 2	50-200 kW	The tariff is negotiated with the community with the possible intervention/review of regulatory bodies
Class 3	Above 200 kW	The company will need to submit full tariff computation to EEA for a full-scale review.

● Off-grid tariff principles

- Tariff must cover the system's incurred cost including CAPEX and OPEX, as well as a reasonable return on investment.
- The financial needs of the developer need to be balanced with the community's **ability and willingness-to-pay**.
- Allows **cross-subsidy** between customer groups
- **Grants or subsidies will not be accounted for** in the tariff computation.
- Mini grid tariffs are to be set **for a period of four years** unless a review is requested earlier by the developer or the regulator (PEA).
- Lifeline consumption for rural households is below **1kWh/week**. They will be charged a tariff not exceeding the national average end-use tariff.
- Tariff applications may be filed for a portfolio of sites **within the same district/region**, with the same tariff being applied across all mini-grids within the area covered by that MG License.

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Discussion