



— African School of Regulation —

# Electricity Tariff Design: Principles, Methodologies & Regulatory Practice

Call for Applications

## Course Director:

Prof. Ignacio Pérez-Arriaga (MIT, FSR, ASR)

## About the Course

This one-week intensive course is a practical and highly interactive programme that equips participants to design, assess, and apply tariff methodologies in both regulated and competitive market environments.

Beyond the traditional cost-of-service regulation, this curriculum addresses emerging challenges associated with market-based pricing, performance-based regulation, renewable energy integration and distributed energy resources.

Through a combination of lectures and African-context case studies, participants will gain a comprehensive understanding of how costs are incurred and allocated throughout the electricity value chain, how utility revenue requirements are determined, and how these costs are translated into equitable and efficient tariffs for different customer categories.

## Duration & Course Dates

1 week in-person from October 26<sup>th</sup> to 30<sup>th</sup>, 2026

## Location

Accra, Ghana.

## Format

The course is delivered in person over five consecutive days in an intensive, workshop-style format. The programme combines short instructor-led presentations, guided discussions, practical exercises, worked examples, and case studies drawn from real regulatory processes in Africa and other developing markets.

## Language

The course will be delivered in both English and French.

## Target Audience

Designed for commissioners, senior regulatory staff, tariff economists, utility analysts, energy ministry officials, and consultants engaged in electricity sector reform and regulatory capacity building across Africa.

## Introduction

Electricity tariff design remains one of the most critical and complex functions of utility regulation across Africa.

As countries pursue reforms aimed at improving financial sustainability, expanding electricity access, and attracting private sector investment, regulators and utilities are required to develop sophisticated approaches to tariff setting.

These approaches must balance cost recovery, efficiency, equity, and affordability within often-constrained economic environments.

Across the continent, persistent challenges such as high system losses, under-recovery of costs, limited investment in infrastructure, and rising generation costs continue to place pressure on tariff frameworks.

At the same time, the transition toward decentralised systems, including mini-grids, embedded generation, and renewable energy integration, requires new tariff methodologies that reflect diverse cost structures and service models.

In response to these challenges, sector players have emphasised the importance of training in effective tariff design, including financial modelling as a core competency for tariff setting.

For instance, specialised courses on efficient tariff modelling equip professionals with the ability to construct revenue models, analyse cost structures, and simulate tariff paths under different scenarios.

These programmes highlight the importance of tools such as the Regulatory Asset Base (RAB), Weighted Average Cost of Capital (WACC), and sensitivity analysis in designing robust tariffs.

Building on these approaches, this capacity-building programme adapts and contextualises key financial modelling and tariff design concepts for African regulators, utilities, and policymakers.

It translates advanced modelling techniques into practical regulatory tools tailored to the realities of African electricity markets.

This course equips participants with the analytical tools, regulatory frameworks, and practical skills required to design, review, and communicate electricity tariffs in a rigorous and transparent manner.

It draws on the best international practices and contextual case studies from Sub-Saharan Africa and comparable emerging markets.

## Key Objectives

- Understand the regulatory foundations of electricity pricing and tariff setting.
- Analyse the relationship between costs, prices, and charges across the electricity value chain.
- Apply cost allocation principles to different customer classes and market structures.
- Determine utility revenue requirements under both regulated and competitive environments.
- Design end-user tariffs that promote efficiency, affordability, and cost recovery.
- Evaluate performance-based regulatory mechanisms and incentive structures.

## Course Structure

The course is delivered fully in-person over five consecutive days.

Each day combines concise instructor-led presentations with facilitated discussions and hands-on exercises focused on real-world tariff design challenges.

Morning sessions introduce key conceptual frameworks and analytical methodologies, while afternoon sessions emphasise practical application, peer learning, and group exercises.

The programme culminates on Day 5 with a capstone tariff design exercise in which participants apply the full range of course learning to a realistic regulatory scenario.

## Course Content

The programme comprises five structured modules delivered across five days.

Each module is designed to build sequentially on prior content, integrating theory with applied regulatory practice.

### Module 1 – Costs, Prices and Charges

This module provides participants with an understanding of how the supply of electricity is regulated; concepts of costs, prices, and charges, and how they depend on the adopted regulatory framework; and the principles that must guide the allocation of these costs, prices, and charges to end customers.

### Module 2 – Determining the Revenue Requirement

In this module, participants learn about the nature of costs and prices in the electricity supply chain and how they are determined under monopolistic and market conditions. Other charges may also be considered.

### Module 3 – End-Customer Tariff Design

Building upon the revenue requirement framework, this module examines how utility costs are translated into tariffs for end-users.

# Our Value Proposition

Participants will learn how tariff structures are developed to recover costs while promoting economic efficiency, affordability, and fairness. The module discusses the treatment of different cost components within tariff structures, including generation, transmission, distribution, retail supply, and institutional costs.

## **Module 4 - Performance-Based Regulation and Distributed Energy Resources**

This module introduces participants to the principles and practical application of performance-based regulation, including the design of incentives, performance targets, rewards, and penalties. Participants will examine international experiences with incentive regulation and explore the widely used RPI-X framework, assessing its strengths, limitations, and suitability under different market conditions, including the growing impact of distributed energy resources (DERs).

## **Module 5 - Special cases. Practical recommendations. Review of the group case studies.**

The final module addresses complex and emerging challenges that often require regulators and policymakers to balance economic efficiency with broader social and policy objectives. Participants will explore special tariff design issues such as cross-subsidisation and the growing phenomenon of grid defection. Participants work through an Excel-based tariff simulation to understand the various stages of tariff build-up.

Participants will benefit from a **highly practical and policy-relevant** learning experience designed to directly support real-world regulatory decision-making in their respective countries.

The course goes beyond theory by immersing participants in **hands-on exercises** such as tariff review simulations, utility performance diagnostics, etc., all tailored to the operational realities of Africa's electricity market.

The programme is delivered by a distinguished faculty comprising experienced former regulators from Africa and Europe, leading academic experts from globally recognised institutions such as **MIT, KNUST, University of Cape Town, and the European University Institute**, and seasoned industry practitioners. This blend of expertise ensures a balance between global best practice and grounded, implementation-focused insights.

Drawing on the African School of Regulation's extensive experience in training regulators across more than 20 African countries, the course offers a unique platform for peer learning and cross-country knowledge exchange. This exposure will enable participants to leverage continental best practices, avoid common reform pitfalls, and make more informed, evidence-based regulatory decisions.

## Target Audience

This course is designed primarily for:

- Commissioners and senior staff of national and subnational electricity regulatory commissions.
- Economic and technical regulatory specialists responsible for tariff setting, revenue requirement analysis, and utility oversight.
- Economists, engineers, and financial analysts in energy utilities and distribution companies.
- Policy and planning officials at energy ministries supporting tariff policy and regulatory reform.

•Consultants and advisors engaged in electricity sector reform, utility restructuring, or regulatory capacity building.

## Evaluation Policy

Participants are expected to fully engage in all training activities throughout the five-day programme.

Active participation in exercises, case study discussions, and the Day 5 capstone exercise is required.

A Certificate of Participation will be awarded to participants who attend all sessions and contribute substantively to the group exercises and discussions delivered during the course.

## Fees Schedule

CATEGORY	FEES	DEADLINE
Standard Fee	\$1,850	30th September 2026
ASR Alumni Discount	\$1,400	30th September 2026

## [Course Registration Link](#)

For more information kindly contact us at [support@africanschoolregulation.org](mailto:support@africanschoolregulation.org)