



FINANCIAL MODELLING FOR UTILITY TARIFF SETTING

WHAT IS THE COURSE ABOUT?

Power utilities across Africa face the challenge of balancing financial sustainability with the delivery of affordable, reliable electricity. Tariff setting is a critical tool for utilities to recover costs, yet many struggle with inconsistent and non-cost-reflective tariff methodologies. Emerging trends – such as renewable energy and distributed generation – add complexity to pricing, making effective financial modelling more important than ever. The FMUTS course addresses these challenges by combining conceptual foundations of economic regulation with hands-on modelling practice. It equips participants with the skills/ building blocks to design and build robust tariff models for regulated utilities, ultimately helping improve utility performance and power sector sustainability.

WHAT SHOULD A REGULATED BUSINESS FINANCIAL MODEL DO?

1. Forecast the Revenue Requirement and Average Tariff to ensure both allocative efficiency and sustainability.
2. Calculate tariff levels between different types of consumers or users to assess equity and fairness.
3. Calculate the required future funding and report on debt metrics required for lenders. The model can help lenders gain comfort with the utilities' projections.
4. Compare actual performance of the utility against planned performance. This can help us identify which specific goals were not met and why, or to review the 'productive efficiency' of a utility.
5. Run sensitivities to see how changes in business assumptions impact the required tariffs, or future funding required.

6. Sensitivities can help us identify future business risks! The model can tell us what changes in assumptions impact results the most and thus what management needs to focus their attention on.

(Watch a short course introduction video here: <https://youtu.be/EAW0K0M906s>)

WHO SHOULD ATTEND

Ideal for infrastructure regulators, power utility professionals and executives, financial analysts, regulatory economists, senior professionals and advisors in regulatory authorities, government officials and policymakers, development finance institutions, banks and lenders, and private-sector companies in the energy domain, development partners and financial planning in the power sector.

FORMAT & DURATION

Two-week blended programme (1 week online preparatory sessions + 1 week in-person training). Participants engage in ~1.5–2 hours/day of online learning in Week 1, followed by an intensive Week 2 of face-to-face lectures and workshops in Cape Town.

COMPREHENSIVE CONTENT

Covers all key components of tariff-setting financial models – including revenue requirements, regulatory asset base (RAB), weighted average cost of capital (WACC), capital expenditure (CAPEX), operational expenditure (OPEX), depreciation, 3-way financial statement, Variance analysis, Tariff structures – within the context of utility regulation and sustainability.

Frequently Asked Questions (FAQ)



HANDS-ON LEARNING

Emphasis on practical skills – participants progressively build a complete financial model from scratch to determine required utility revenues and tariffs. The model is used to run sensitivity analyses and explore various tariff scenarios and paths.

EXPERT INSTRUCTION

Lectures and tutorials led by world-class faculty and industry experts joined by experienced African practitioners, ensuring global best practices are grounded in the realities of African power sectors

COURSE OUTLINE – KEY TOPICS COVERED

(Week 1 consists of online preparatory work; Week 2 is face-to-face intensive sessions)

Introduction to Economic Regulation & Utility Sustainability

Overview of why utilities are regulated, fundamentals of tariff methodologies, and indicators of utility financial health and Revenue Requirements

Asset Valuation, & Utility Investment Criteria

Establishing the Regulatory Asset Base (RAB) and planning for capital investments. Covers CAPEX planning, asset valuation, and Depreciation techniques to ensure long-term sustainability of utility assets.

Cost of Capital & Financial Statements

Calculating the Weighted Average Cost of Capital (WACC) and the opportunity cost of capital. Integrating Operational Expenditure (OPEX) and building three-way financial statements (income statement, balance sheet, cash flow) to assess utility viability.

Tariff Structure Design & Modelling

Designing cost-reflective tariff structures and cost allocation across customer categories (energy charges, demand charges, fixed fees). Best-practice modelling techniques are applied, and Excel-based tools (e.g. goal seek) are used to determine required tariffs for cost recovery.

Case Studies & Advanced Topics

Applying the financial model to real-world scenarios and case studies, with a focus on African. Analyzing the impact of distributed energy resources (DERs) on tariffs and discussing best practices for financial sustainability. The course concludes with a final model review, group discussions, and key takeaways for implementation.

HOW CAN I APPLY FOR THE COURSE?

Interested participants can apply via our website www.gsb.uct.ac.za/powerfutureslab

Email | pflcourses.gsb@uct.ac.za

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Delivery Method

Precourse Week (online) | 31 March-4 April 2025

Face-to-Face | 7-11 April 2025 | R29 950

Location

UCT Graduate School of Business, Cape Town