



Utility Tariff Setting: Revenue Requirement, Cost-of-Service Study and Tariff Design



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Introduction:

Utility tariff setting decides whether an electricity, water or gas utility recovers its efficient costs, funds its investment programme and still keeps bills affordable. Tariffs built on outdated cost data, a weak revenue requirement or arbitrary allocation between customer classes lead to under-recovery, cross-subsidies and disputed tariff reviews. This Core Concept course trains utility finance, regulatory and commercial staff and regulator tariff analysts to build the revenue requirement, run a cost-of-service study, design tariff structures and defend them in consultation. Participants build a Tariff Model and Tariff Review Submission Pack.

Course Objectives:

- Define tariff objectives for cost recovery, efficiency signals, fairness, affordability and revenue stability and resolve the trade-offs between them
- Calculate a revenue requirement from operating expenditure, depreciation, the regulated asset base and an allowed return based on WACC
- Compare rate-of-return, price-cap and revenue-cap regimes and model how each shifts cost, volume and efficiency risk between the utility and its customers
- Conduct a cost-of-service study that functionalises, classifies and allocates costs across residential, commercial, industrial and bulk customer classes
- Design fixed, volumetric, inclining block, time-of-use and demand charge structures and test their bill impact, subsidies and social tariff options
- Build a tariff model in Excel and prepare a tariff review submission and stakeholder consultation response

Target Audience:

- Utility finance functions responsible for revenue forecasts, regulatory accounts and asset base records
 - Regulatory affairs functions that prepare tariff applications and respond to regulator information requests
 - Commercial and pricing functions that design customer tariffs, connection charges and bulk supply prices
 - Regulator tariff analysis functions that review revenue requirements and approve tariff schedules
 - Planning and investment functions whose capital programmes feed the regulated asset base and depreciation
 - Customer policy functions that manage subsidy schemes, social tariffs and affordability measures
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Course Outline:

Day 1: Tariff Objectives, Principles and the Regulated Utility Context

- Natural Monopoly Economics and the Case for Regulated Tariffs in Networks
- Tariff Objectives Matrix: Cost Recovery, Efficiency, Equity, Simplicity and Revenue Stability
- Electricity, Water and Gas Value Chains: Bulk Supply, Transmission, Distribution and Retail Costs
- Tariff Setting Cycle: Application, Assessment, Determination and Periodic Review
- Current Tariff Health Check: Cost Recovery Ratio, Cross-Subsidy Map and Tariff Gap

Day 2: Revenue Requirement Building Blocks and Regulatory Models

- Revenue Requirement Formula: Opex, Depreciation, Return on Asset Base and Tax Allowance
- Regulated Asset Base Roll-Forward: Opening Value, Capex Additions, Disposals and Indexation
- Allowed Return Estimation: Cost of Debt, Cost of Equity, Gearing and WACC
- Rate-of-Return Regulation and the Averch-Johnson Over-Capitalisation Incentive
- Price-Cap Inflation Minus X Versus Revenue-Cap Regulation: Efficiency Factor and Benchmarking

Day 3: Cost-of-Service Study and Allocation Across Customer Classes

- Cost Functionalisation: Production, Transmission, Distribution, Metering and Customer Service
- Cost Classification into Demand-Related, Energy or Volume-Related and Customer-Related Components
- Allocation Factors: Coincident Peak, Non-Coincident Peak, Average and Excess Demand Methods
- Customer Class Load Profiles, Peak Contribution and Water or Gas Seasonal Demand Patterns
- Class Revenue-to-Cost Ratios and Unit Cost Schedules per kWh, Cubic Metre and Customer

Day 4: Tariff Structure Design, Subsidies and Affordability Risks

- Two-Part Tariffs: Fixed Customer Charge Versus Volumetric Charge and Revenue Stability
- Inclining Block Tariffs, Lifeline Blocks and Block Threshold Setting
- Time-of-Use, Critical Peak and Capacity or Demand Charges for Large Users
- Subsidy Design: Targeted Social Tariffs, Direct Transfers and Cross-Subsidy Unwinding
- Bill Impact Analysis, Affordability Ratios and Tariff Rebalancing Glide Paths

Day 5: Modelling Build: Tariff Model and Tariff Review Submission Pack

- Excel Tariff Model Architecture: Input Sheets, Calculation Blocks, Checks and Scenario Switch
 - Case Build: Multi-Year Revenue Requirement and Asset Base Projection for a Distribution Utility
 - Case Build: Cost Allocation and Tariff Schedule for Four Customer Classes With Sensitivity Tests
 - Stakeholder Consultation Simulation: Regulator Questions, Customer Group Objections and Responses
 - Tariff Review Submission Pack Presentation and Peer Challenge
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Skills You Will Gain:

- Revenue Requirement Calculation
- Regulated Asset Base Modelling
- Cost of Capital Estimation
- Cost Functionalisation and Classification
- Customer Class Cost Allocation
- Rate Design
- Affordability and Subsidy Analysis
- Regulatory Submission Drafting

Why Attend This Course:

- Return with a working Tariff Model and Tariff Review Submission Pack built on a multi-year utility case
- Explain to boards and regulators how each cost line, asset addition and return assumption moves the final tariff
- Spot cross-subsidies between customer classes and set out a rebalancing path that protects vulnerable users
- Compare tariff practice with finance, regulatory and pricing peers from electricity, water and gas utilities and regulatory bodies

Conclusion:

A tariff is only as sound as the cost evidence and allocation logic behind it. The week moves from tariff objectives and the regulated utility context, through the revenue requirement, asset base, allowed return and the choice between rate-of-return, price-cap and revenue-cap regimes, to the cost-of-service study and allocation across customer classes, then to tariff structures, subsidies and affordability. The final day builds a Tariff Model and Tariff Review Submission Pack ready for internal approval and regulator consultation.
