

	Friday 20 Aug-2021 Pre-course basics	Monday 23-Aug-2021 Introduction to Economic Regulation Model drivers and scenarios	Tuesday 24-Aug-2021 Utility Sustainability	Wednesday 25-Aug-2021 Regulatory Asset Base	Thursday 26-Aug-2021 Opportunity Cost of Capital WACC	Friday 27-Aug-2021 Depreciation	Monday 30-Aug-2021 3-way Financial Statements	Tuesday 31-Aug-2021 OPEX	Wednesday 01-Sep-2021 CAPEX	Thursday 02-Sep-2021 Tariff Structure	Friday 03-Sep-2021 Recap	
Videos can be watched at any time but before the scheduled afternoon sessions												
08h00 - 11h00	<p>Videos (all Pivotal180)</p> <p>0.12 Intro to debt and equity (6 min) 0.13 Benefits of leverage (3 min) 0.14 Present value math (18 min) 0.15 NPV Function (5 min) 0.16 IRR (8 min) (Excel functions videos: 14 min) (Best practice videos: 16 min)</p> <p>Reading:</p> <ul style="list-style-type: none"> - Demise of the standard reform model (Gratwick & Eberhard) - Financial Viability of Electricity Utilities in Africa 	<p>Videos</p> <p>1.1 Utility overview and definition of case study 1.2 Need for financial models 1.3 Final model overview 1.4 Excel shortcuts and introduction 1.5 Objectives of economic regulation 1.6 Overview of economic regulatory methodologies</p>	<p>Videos</p> <p>1.1 Economic sustainability 1.2 Financial sustainability 1.3 Modeling alternatives: real vs nominal - firm or equity holders - tax treatment - flow vs discount rate 1.4 Demand Projections</p>	<p>Videos</p> <p>1.1 Asset Base: Which assets to include how to value them for regulatory purposes. 1.2 Historic vs replacement values 1.3 Final Asset Base</p> <p>Reading:</p> <ul style="list-style-type: none"> - Asset base evolution - RAB & Depreciation Notes - Asset Valuation 	<p>Videos</p> <p>1.1 Weighted Average Cost of Capital (WACC) 1.2 Risk aversion 1.3 Risk vs returns 1.4 Cost of debt (credit ratings) 1.4 Country Risk premium</p>	<p>Videos</p> <p>1.1 Regulatory treatment of Depreciation 1.2 Depreciation methods</p> <p>Reading:</p> <ul style="list-style-type: none"> - Cost Recovery and Financial Viability of the Power Sector in Developing Countries - WB 	<p>Videos</p> <p>1.1 3-way financial statements (balance sheet, income statement, cash flow statement / cashflow waterfall) 1.2 Working capital</p>	<p>Videos</p> <p>1.1 OPEX – Benchmarking 1.2 Efficiency factors 1.3 Regulatory treatment of losses</p>	<p>Videos</p> <p>1.1 Regulatory treatment of investments 1.2 Investment types (replacement, expansion, quality) 1.3 South Africa - Cost of Supply methodology</p>	<p>Videos</p> <p>1.1 Allocative efficiency 1.2 Cost allocation principles Residential and non-residential tariffs</p>	Revision	
Afternoon Live Online Sessions												
12h00-12h30	Test Run	Welcome Course Overview Learning approach	Revenue Requirement Building Blocks (20 min)	RAB main conceptual issues (20 min)	Tutor session on WACC and risk vs return.	Regulatory aspects of depreciation (15 min)	Week 1 review	Operating costs and efficiency factor (15 minutes)	Regulatory treatment of investments (15 minutes)	Modelling alternative tariff structures	Tutors: Questions, clarifications	
12h30-13h00		Power utility challenges in Africa	Modelling: - Best practices in modeling revenue requirements to determine tariffs - Presentation of Simple Integrated Model - single year Model	DeCoXX RAB - Non regulated assets - Working capital - User contributed assets	WACC calculations - Add WACC calculation and revise current tariff requirement.	Depreciation calculations I: - Develop reducing balance and straight line depreciation calculations and allocate capital costs to appropriate category.	3-way financial statements I - Build up forecast financial statements	Operating cost Develop operating costs calculations Efficiency factor estimates	Investments: - Develop investment calculations (definition and use of capex drivers energy users peak demand, etc). - Exogenous investments	Graphing and variance analysis - Building effective graphs to communicate a story and describe variances in actual performance to projected performance.	Best practices for modeling - Recap of approaches. - Application to other scenarios.	
13h10-13h40		Key regulatory Objectives/ aspects of tariff regulation	Limitation of test-year approach - Multi year tariffs (15 min)	Sources of finance: - Debt, equity, third party assets. User contributed assets.	Sensitivity of Tariff to WACC, capital costs. - Review the impact of each input to WACC on the tariff required.	Depreciation calculations II: - Develop reducing balance and straight line depreciation calculations and allocate capital costs to appropriate category.	3-way financial statements II - Build up forecast financial statements	Losses Develop losses calculations.	Endogenous investments: - Financial restrictions - Impact of WACC and depreciation on financeable investments	Best practice use of Excel Goal Seek - Use Goal seek to determine tariffs or costs required to meet tariff thresholds	South Africa Case Study (Optional) SSEG Tariff Derivation & Compensation Schemes	
13h40-14h20		Financial modelling as a regulatory tool. - International experience	Simple multi-year tariff model - Sensitivity of tariffs to main building blocks	Historic vs forecast modeling - Develop flexibility in the model to review historic data AND determine a forecast.	BREAK	Depreciation calculations III - Finalize depreciation calculations and review impact on tariffs required.	Estimating financial needs	Determine revised tariff: Comparison of tariffs for different levels of operating costs.	BREAK	Live Exercise: - Final case study: distributed solar PPAs and storage	Anton Eberhard/Peter Twesigye Thanks & Farewell	
14h30-15h30 30mins		Tutor Clarifications	Tutor Clarifications	Tutor Clarifications	Tutor Clarifications	Tutor Clarifications	South Africa Case study (Optional) - Multi-year Tariff Setting and Tariff Orders - Concept of Regulatory Clearing Accounts (RCA) and its workings	South Africa Case Study (Optional) - NERSA'S Cost of Supply methodology - NRS058 - Calculation of connection charges and capital contributions in line with NRS069	South Africa Case Study (Optional) - Energy Transacting - Wheeling tariff formulation methodologies and pricing for bi-directional energy flow	South Africa Case Study (Optional) - SSEG Cost of Service Tool & Impacts on Muncip revenues		
		Review of Videos and Pre-Course Reading Materials						Tutor Clarifications	Tutor Clarifications	Tutor Clarifications	Tutor Clarifications	