

DIE-MSG-514 Regulation and New Business Models

Syllabus

Chapter 1: Introduction

- 1.1 What is regulation about?
- 1.2 Regulatory models
- 1.3 Regulatory institutions

Chapter 2: Microeconomics applied to electric power systems

- 2.1 Demand and supply
- 2.2 Basics on centralized economic decision making - short term dispatch
- 2.3 Basics on centralized economic decision making - long term investment planning
- 2.4 Perfect competitive markets - marginal theory
- 2.5 Bidding in markets and long-term contracts

Chapter 3: Wholesale markets

- 3.1 Day-ahead markets
- 3.2 Ancillary services
- 3.3 Capacity mechanisms
- 3.4 Renewables, support mechanisms and markets

Chapter 4: Networks and storage

- 4.1 Transmission and the TSO
- 4.2 Distribution and the DSO
- 4.3 Regulatory models for storage
- 4.4 Regulation of telecommunications (from the point of view of electricity infrastructure)
- 4.5 TSO-DSO Interaction

Chapter 5: Retail markets and tariffs

- 5.1 Retail markets
- 5.2 Tariff design
- 5.3 Energy poverty

Chapter 6: DERs and new business models

- 6.1 DERs and distributed platforms

- 6.2 Regulation on self-generation (self-consumption)
- 6.3 New business models, energy communities, transactive energy and blockchain
- 6.4 Universal access