

CEER Online Specialised Training on Network Tariffs for Transmission and Distribution

Two-week online training

Online Classes:

14:00-17:00 (CET) on 8 March 2021

14:00-17:00 (CET) on 9 March 2021

14:00-17:00 (CET) on 10 March 2021

COURSE PROGRAMME

Energy networks play a key role in transporting energy between energy producers and consumers, typically as a monopoly activity in an area, with their costs comprising a significant portion of consumers' bills. As a result, energy network revenues and tariffs are set by European energy regulators to help ensure value for money and security of supply. There is also a focus on incentivising a high-quality network service.

In addition, there are now significant developments impacting on the network businesses, driving a re-think in tariff-setting by regulators. This includes increased levels of wind and solar generation, more integrated European wholesale markets, a move to increased demand-side flexibility and the growth of energy communities. Distribution System Operators are at the front-end of such changes, facilitated in many cases by the roll-out of Smart Meters.

Energy regulators must tread carefully in setting tariffs in this rapidly changing environment, balancing the traditional regulatory aims of efficient, secure and high-quality energy networks with the newer objectives and innovation that policy-makers seek for the sector.

Energy regulators need expertise in setting allowed network revenues - including an appropriate return on investments/capital - and the associated tariffs, to meet these (sometimes competing) objectives. This tailor-made CEER online training programme will help deliver energy regulators this expertise, focusing mainly on setting network tariffs in the electricity sector. The programme will cover the fundamental principles and future direction of tariff setting for transmission and distribution, mainly in electricity sector. This will include specific relevant examples from countries across Europe. The programme will also focus on the impact of new developments and innovation on the tariff setting process for European energy regulators and how to design the new tariff structures to address the new challenges.

Structure of the course:

- **Week 1:** Individual preparation to the course - Literature review, reading materials, preparation of exercises and course work: ideally 1-8 March 2021
- **Week 2:** Three Online Sessions:
 - Online Class 1 on Fundamental Principles and Different Models and Methodologies of Network Tariff Regulation: 14:00-17:00 (CET) on 8 March 2021
 - Online Class 2 on Different Models and Methodologies and Tariff Setting in the Context of New Developments in Europe – Part 1: 14:00-17:00 (CET) on 9 March 2021
 - Online Class 3 on Tariff Setting in the Context of New Developments in Europe – Part 2: 14:00-17:00 (CET) on 10 March 2021

Online Class 1, 14:00-17:00 (CET) on 8 March 2021

14:00-14:20 Opening remarks, introduction of the course programme, course format and introduction of the participants.

- Mr Alexander Luedtke-Handjery, BNetzA, Germany, Course Director
- Ms Anh Tran, CEER Training Manager

SESSION 1 FUNDAMENTAL PRINCIPLES AND DIFFERENT MODELS AND METHODOLOGIES OF NETWORK TARIFF REGULATION

Traditionally, cost-plus and rate-of-return models were widely used by energy National Regulatory Authorities (NRAs) in electricity and gas network tariff regulation. However, these models were considered to lack incentives for regulated companies to minimise costs and, conversely, could lead to 'gold-plating' and inefficient investment choices. This led to the emergence of incentive-based regulatory approaches, including price controls, with penalty and reward tools linked to attempts to improve network performance.

A set of fundamental principles informs the work of energy NRAs in tariff-setting: system reliability, cost efficiency, non-discrimination, transparency, stability and predictability. These principles inform the key building-blocks for NRAs in setting allowed network revenues - including appropriate operational costs, investment levels and return on capital - and in designing the associated network tariffs, as discussed in this Session. While energy NRAs may use the fundamental principles and building blocks in designing electricity network tariffs, the exact approach can differ in each country, as a function of the local circumstances and market / network structure. NRAs also try to address the new challenges in the transmission and distribution systems in electricity in their new tariff design.

14:20-15:00 Fundamental principles and future direction of network tariff regulation.

- a) Key principles of economic regulation

- b) Relationship between revenues, tariffs, building blocks of regulation
- c) Future direction of network tariff structures in the electricity sector and the Clean Energy Package.

- **Mr Tim Schittekatte, FSR**

Q&A

15:00-15:30 Some practical approaches in setting allowed network revenues (calculation of key parameters of RAB, WACC, optimization of CAPEX, auditing of OPEX, etc.). Practical exercise.

- **Mr Johan Allonsius, CREG, Belgium**

Q&A

15:30-15:45 *Short break*

15:45-16:15 Group work: exploring different types and components of network tariffs - national similarities and differences.

- **Moderator: Mr Alexander Luedtke-Handjery, BNetzA, Germany, Course Director**

16:15-16:45 **Case study 1:**

Tariff setting methodology for electricity distribution/transmission in Germany.

- a) Cost allocation by type of user, connection charging, ancillary services/balancing charges and tariff structures
- b) Practical exercise on the calculation of the tariff structures.

- **Mr Alexander Luedtke-Handjery, BNetzA, Germany, Course Director**

Q&A

16:45-17:00 Wrap up of Online Class 1.

- **Mr Alexander Luedtke-Handjery, BNetzA, Germany, Course Director**

- END FIRST DAY -

Online Class 2, 14:00-17:00 (CET) on 9 March 2021

14:00-14:45 **Case study 2:**

Tariff setting methodology for electricity distribution/transmission in the Netherlands.

- a) Brief explanation of the model/methodology.
- b) Implementation of yardstick regulation.
- c) The rationale for the tariff structure which is set up depending on capacity.
- d) New price review period.

- **Mr Paul Adriaansen and Ms Judith van Dijk, ACM, the Netherlands**

Q&A

SESSION 2 TARIFF SETTING IN THE CONTEXT OF NEW DEVELOPMENTS IN EUROPE

Electricity transmission and distribution businesses and tariff setting by regulators are being impacted on by a range of developments in Europe. In transmission, these developments include more integrated wholesale energy markets and cross-border security of supply considerations, increased levels of intermittent generation and the drive towards Smart Networks. Distribution System Operators are at the forefront of innovation in regulatory oversight given the dramatic increase in small-scale renewable generation and the desire by policy-makers for consumers to be able to play a more active role in the market, thus the growth of energy communities. A mass roll-out of electric vehicles would add another level of complexity to distribution tariff-setting. How NRAs design the new tariff structures to address the new challenges is discussed in this Session. It includes practical examples from countries across Europe.

14:45-15:15 How energy regulators design the electricity distribution tariffs that could support the energy transition, including the areas of interaction with the procurement of flexibility, storage and electric vehicles and the impact of the Clean Energy Package.

- **Mr Daniel Horta, ERSE, Portugal**

15:15-15:30 *Short break*

15:30-16:00 **Group work:**

What are the different network tariff structures in Europe and what are the new challenges faced by energy regulators (smart grids, e-mobility, integration of renewables, etc.)?

- **Mr Alexander Luedtke-Handjery, BNetzA, Germany, Course Director**

Q&A

16:00-16:45 **Case study 3:** New tariff structures to address new challenges in distribution systems in Italy: case study on the use of smart meters for time-of-use capacity limitation for EV owners who charge at home.

- **Mr Emanuele Regalini, ARERA, Italy**

Q&A

16:45-17:00 Wrap up of Online Class 2.

- **Mr Alexander Luedtke-Handjery, BNetzA, Germany, Course Director**

- END SECOND DAY -

Online Class 3, 14:00-17:00 (CET) on 10 March 2021

SESSION 2 TARIFF SETTING IN THE CONTEXT OF NEW DEVELOPMENTS IN EUROPE (cont.)

14:00-14:45 How to design network charges in a context of high penetration of distributed resources, prosumers, on-site distributed generation and Energy Communities.

- **Prof. Tomás Gómez, Universidad Pontificia Comillas**

Q&A

14:45-15:15 Group work: specific new challenges from a regulatory perspective faced by DSOs on the issues discussed in the previous session.

- **Moderator: Prof. Tomás Gómez, Universidad Pontificia Comillas**

15:15-15:30 *Short break*

15:30-16:00 **Case study 4:** New tariff structures to address new challenges in distribution systems in Norway – case study on the process to implement power-based tariffs.

- **Mr Jørgen Tjersland and Mr Bjørnar Araberg Fladen, NVE-RME, Norway**

Q&A

16:00-16:30 **Case study 5:** New tariff structures to address new challenges in distribution systems in France – case study of time-of-use and variable-peak signals.

- **Mr Maël Demortier, CRE, France**

Q&A

16:30-17:00 General discussion and course wrap-up.

- **Mr Alexander Luedtke-Handjery, BNetzA, Germany, Course Director**

- **Ms Anh Tran, CEER Training Manager**

- END OF THE COURSE -