



Online training

Introduction to Sustainable Energy: Theory and Practice

20 January – 28 February 2025

Background

As part of the annual campaign “The European Union – Central Asia Sustainable Energy Days”, the European Union (EU) funded project “Sustainable Energy Connectivity in Central Asia ([SECCA](#))” conducted a student debate in 2024, involving the students and faculty staff of higher educational institutions in 5 countries of the Central Asia region. The EU awarded the winners and participants of this debate with a special prize – an online training on sustainable energy delivered by the Florence School of Regulation (Italy), a European centre of excellence for innovative trainings on energy and climate.

Programme Structure

The tailor-made course is structured into nine modules conducted over five weeks. Each module will include a live session of 2 hours. For each module, preliminary material, such as reading material and video lectures, will be made available to participants in advance, ensuring that those new to the topics can familiarise themselves with the fundamentals.

Course Calendar

Access to the platform: 20 January 2025

- Self-pace training with videos and reading materials (in English)

Module 1 – The EU energy and climate policy context

- Instructors: Alberto Pototschnig and Albert Ferrari (FSR)
- Description: This Module will provide an overview of the main policies adopted by the European Union in the area of energy and climate. The focus will be on the climate and energy targets and the measures which have been put in place to achieve these targets. A comparison will also be made with targets set in other regions of the world.
- Live session: 27 January, 14:00-16:00 Astana, Ashgabat, Dushanbe, Tashkent time / 15:00-17:00 Bishkek time

Module 2 – The EU internal energy market

- Instructor: Alberto Pototschnig and Marzia Sesini (FSR)
- Description: This Module will present the way in which the electricity and gas markets have been integrated across the European Union into Internal Energy Markets. The focus will be



on how electricity and gas is traded across the borders between different Member States. This will be compared with the way in which similar aspects are managed in the electricity sector in other parts of the world.

- Live session: 30 January, 14:00-16:00 Astana, Ashgabat, Dushanbe, Tashkent time / 15:00-17:00 Bishkek time

Module 3 – The EU regulation of the power sector

- Instructor: Alberto Pototschnig (FSR)
- Description: This Module will present the different approaches for the regulation of the electricity sector, and more specifically, the electricity network industries, and assess their pros and cons. New trends in regulation, to promote overall efficiency of the electricity networks, will also be outlined.
- Live session: 4 February, 14:00-16:00 Astana, Ashgabat, Dushanbe, Tashkent time / 15:00-17:00 Bishkek time

Module 4 – Energy efficiency

- Instructor: Max Munchmeyer (FSR)
- Description: This module will explore the concept and importance of energy efficiency more broadly before focusing on how the European Union has pursued such efficiency through law and policy. In particular, this module will consider how the so-called 'energy efficiency first principle' has found expression in the revision of the Energy Efficiency and Energy Performance of Buildings Directives. Finally, the principal challenges to greater energy efficiency across the EU will be analysed.
- Live session: 6 February, 14:00-16:00 Astana, Ashgabat, Dushanbe, Tashkent time / 15:00-17:00 Bishkek time

Module 5 – Renewable energy

- Instructor: Nicolò Rossetto and Sofia Nicolai (FSR)
- Description: This module will provide an overview of sustainable and renewable energy with a specific focus on the European Union. The main techno-economic features and uses of renewable energy sources will be illustrated, followed by a description of the various support schemes that have been traditionally implemented (e.g., feed-in tariffs and feed-in premia). The implications of those schemes and the uptake of new renewable energy sources on the power sector will be briefly mentioned. Eventually, the module will illustrate the latest developments associated with renewable support (increasing use of auctions and tenders to award support, the introduction of long-term contracts in the form of contracts for difference and power purchase agreements).
- Live session: 14 February, 14:00-16:00 Astana, Ashgabat, Dushanbe, Tashkent time / 15:00-17:00 Bishkek time

Module 6 – Electro-mobility

- Instructor: Swetha Ravi Kumar (FSR Global)
- Description: This module will look at the interlinkages of the mobility space with the



electricity sector and dive deep into scope of EVs and various business models of engagement, including how EVs integrate with the grid.

- Live session: 17 February, 14:00-16:00 Astana, Ashgabat, Dushanbe, Tashkent time / 15:00-17:00 Bishkek time

Module 7 – Consumer engagement and empowerment

- Instructors: Albert Ferrari and Lucila de Almeida (FSR)
- Description: This module will explore how the regulatory framework has evolved to ensure consumers switch from a passive act of consuming energy to performing new roles, enhancing consumer engagement and empowerment to participate in the energy transition and electricity market without compromising consumer rights. Key concepts include the distinction between passive and active consumers, demand response, smart meters, demand response, self and collective consumption, energy sharing, energy communities, and demand-side flexibility.
- Live session: 20 February, 14:00-16:00 Astana, Ashgabat, Dushanbe, Tashkent time / 15:00-17:00 Bishkek time

Module 8 – The gender dimension of sustainability strategies in the energy sector

- Opening presentation by a representative of DG ENER, European Commission. Panel debate by representatives of Edison, Eurogas, and GIE.
- Description: This Module will illustrate the initiatives taken by the European Commission in recent years, aiming to increase gender balance in the European energy sector. After an introductory presentation, the module will be structured as a panel debate where speakers from the world of industry, energy associations and regulators will offer their perspectives on this very relevant and ongoing debate.
- Live session: 21 February, 14:00-16:00 Astana, Ashgabat, Dushanbe, Tashkent time / 15:00-17:00 Bishkek time

Module 9 – Roundtable on challenges in the sector

- Instructor: Alberto Pototschnig (FSR)
- Description: This Module will provide an opportunity to discuss the current state of development of the energy sector in the Central Asia region in the areas covered by previous modules. In this part of the Module input from participants is expected. The Module will also assess how the EU experience in the areas covered by the previous modules could be of relevance for the Central Asia region.
- Live session: 24 February, 14:00-16:00 Astana, Ashgabat, Dushanbe, Tashkent time / 15:00-17:00 Bishkek time

Final quiz deadline: 28 February 2025

Certificates delivered by 6 March 2025