Net Zero Transition: Future of electricity markets

Learning and development objectives:

- How the physical electricity system may evolve to enable greater electrification of the economy and meet net zero targets
- The role of new generation and electricity storage assets in the low carbon system
- How schemes to support new low carbon technologies operate, and the pros and cons
- Challenges with electricity networks now, and solutions to encourage new connection, efficient siting decisions and new infrastructure investment to meet Clean Power 2030 objectives

Session 1 – Policy, future scenarios and novel technology

10 am	**Introduction & welcome** • Tech check! • Aim and objectives
Module 1	**What is net-zero and what is the latest policy view?** • Climate Change Act ○ Net-zero legal target and Carbon Budgets ***Poll: Which sector of the UK economy has seen the largest emissions reduction?*** • NESO's Future Energy Scenarios – what could a future electricity system look like? • Update on latest UK government policy to promote a decarbonised electricity sector by 2030
Break	

Module 2	**Overview of novel technological solutions**
	Poll: Which of the following technologies do you think is the most critical to deliver a decarbonised electricity sector?
	• How could the following new technologies play a role in the future and why?
	  ○ Carbon Capture Usage and Storage (CCUS)
	  ○ Bioenergy CCS (BECCS)
	  ○ Electricity storage
	  ○ 'Small' nuclear
	  ○ 'Smarter' consumers

11.45	**Q&A**
12.00	**What we will cover off in future sessions and close**

Session 2 – Support arrangements for new technologies

10 am	**Introduction & welcome** • Tech check! • Aim and objectives

Module 3	**Supporting investment in low carbon technologies**
	• Rationale for schemes to support investment in addition to sales in the wholesale market
	• Existing schemes
	  ○ Renewables Obligation
	  ○ Feed-in Tariffs,
	  ○ Capacity Market
	  ○ Contracts for Difference Scheme (AR7 and beyond)
	Case study: Current levels of support

Break	

Module 4	**Supporting investment in new low carbon technologies and the role of the consumer**
	• How new schemes to support new technologies work
	  ○ CCUS
	  ○ New nuclear
	  ○ Long-duration storage
	  ○ Hydrogen production
	• The pros and cons
	• Latest status
	• ***Case study: The changing role of the consumer***
	  ○ Unlocking customer engagement for mutual system and user benefits
	  ○ The pros and cons

11.45	**Q&A**
12.00	**What we will cover off in future sessions and close**

Session 3 – REMA and electricity network reforms

10 am	**Introduction & welcome** • Tech check! • Aim and objectives
Module 5	**Overview of the Review of Electricity Market Arrangements** • REMA objectives • Summer 2025' programme update **Electricity networks – challenges and connections** • Challenges for net zero – reinforcement, constraints, connections and siting • Connections reform ***Poll: Which option do you think has most merit?***
Break	

Module 6	**Electricity networks – strategic planning and locational signals**
	• NESO – Strategic Spatial Energy Planning (SSEP) and Centralised Strategic Network Plan (CSNP) work
	  ○ Objectives
	  ○ Timelines
	• Ofgem – Reforming network charges for more efficient siting of new assets
	  ○ Changes to network connections processes

- Changes to use of system charges

11.45	**Q&A**
12.00	**Next steps and close**