



# LIFE COASE

## Workshop on the role of carbon markets in reaching carbon neutrality

17 - 21 June 2023

12:00-13:30 | Session 4: Carbon pricing and firm behaviour

**Presenter:** Mary Anderson (CAG Consultants)

**Title:** Realist analysis of UK ETS trading and abatement behaviour

**Introduction:** In 2023, the UK ETS Authority commissioned CAG Consultants, Winning Moves and University College London to undertake an evaluation of the UK ETS. The first phase of the evaluation focused on UK ETS processes and outcomes since its establishment in 2021, while the second phase will focus on UK ETS impacts, starting in 2025 when more evidence is available. This paper examines the motivations and reported behaviours of organisations trading in the UK Allowances (UKA) market and also examines UK ETS compliance organisations' motivations and behaviours in relation to Greenhouse Gas (GHG) reduction ('abatement') plans. The research aims to improve the UK ETS Authority's understanding of how trading and compliance organisations interact with the UK ETS, to inform future policy. A realist approach allows detailed exploration of 'why, how and in what circumstances' the scheme triggers different reasoning by different types of organisations (Pawson & Tilley, 1997). This involves the development of realist theory: causal hypotheses set out as 'context mechanism outcome' configurations (CMOs). Key findings from the evaluation research, on both trading and carbon abatement, are presented in section 2. Section 3 of this paper sets out the methodology used to generate the evidence presented in this paper, while section 4 presents initial 'candidate' CMOs about UK ETS organisations' trading and abatement behaviour. These were informed by a literature review (Ibikunle, 2023) and by scoping work with officials in the UK Department for Energy Security and Net Zero. The candidate theories were tested against evidence from in-depth qualitative interviewees with 36 UK ETS operators/aircraft operators and 26 traders (namely organisations with active UK ETS trading accounts), together with 9 wider stakeholders. Qualitative evidence is supplemented against evidence from a quantitative telephone survey with a wider range of UK ETS operators and evidence from network analysis of the UK Transactions Log. In section 5, the paper presents refined CMOs describing observed trading behaviour by UK ETS traders and compliance organisations. These refined theories characterise different types of trading behaviour (e.g. market making, broking, clearing, speculation and compliance-related trading). Drawing on qualitative and quantitative research evidence, the paper also explores whether and why different types of compliance and non-compliance traders use the primary auction, secondary market or 'over the counter' trading, and whether/why they trade in physical UKA, futures or forward contracts. Then, in section 6, the paper presents refined realist theories for planned GHG abatement behaviour by UK ETS compliance organisations. And finally, in section 7, the paper presents a number of policy questions for the UK ETS, based on the findings about trading and abatement, and on issues flagged by respondents during the research.

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