



Energy Security and Net Zero Committee Inquiry: Preparing for the Winter

Written evidence submitted by UCL Institute for Sustainable Resources

24th August 2023

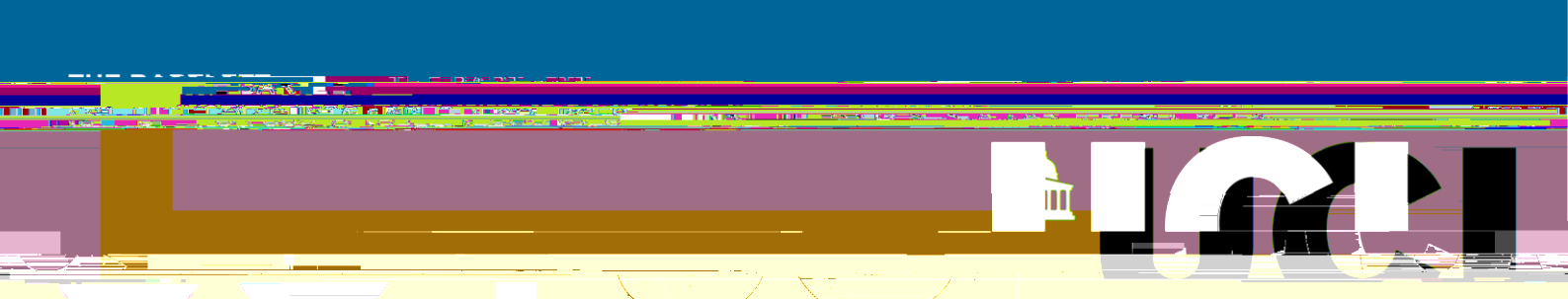
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The UCL Institute for Sustainable Resources' mission is to provide evidence, expertise and training to respond to climate change and support sustainable transitions for people and planet. This response is written by several of our researchers, based on work as part of UCL's programme on electricity market design.

We welcome the opportunity to submit evidence to this important inquiry. We would be delighted to discuss this response, or any of our other work. Please contact Katherine.page@ucl.ac.uk



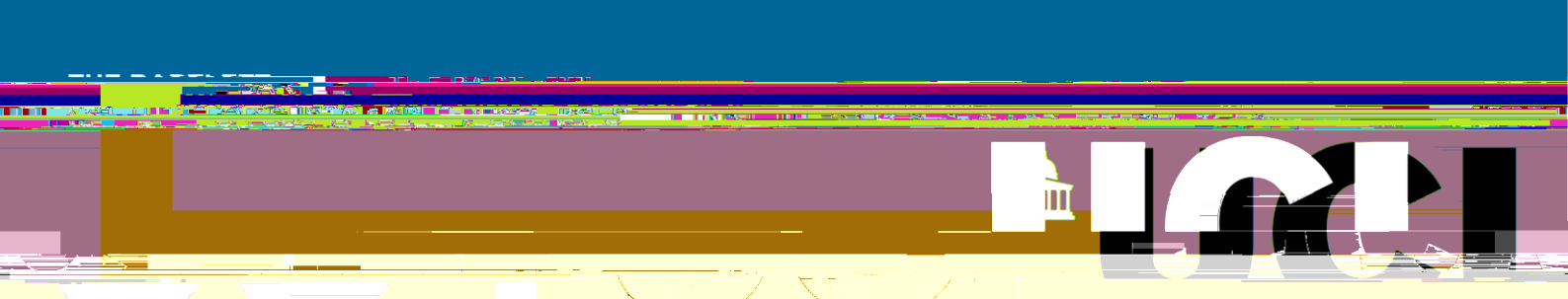
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An energy market appropriate to a renewables-intensive future should ensure that consumers get the benefit of rising renewable energy and the fall in renewables costs that has been observed. This will require government to decouple the highly volatile price of gas from the growing share of reliably priced renewably derived electricity.

Decoupling could be achieved through a split market structure, such as the Green Power Pool proposed by the electricity markets team at UCL (Grubb, Drummond and Maximov, 2022). The pool would be supplied solely by renewable generators, for example those on contracts for difference, operating in tandem with the current wholesale market. During times of over-supply, the pool could sell its surplus to the wholesale market, and conversely in times of under-supply the pool could buy electricity back. Initially, on the demand-side, electricity from the pool could be targeted to provide cheaper energy for vulnerable households who are most severely affected by price volatility. A targeted pool could organically reduce the costs associated with social support schemes such as a social tariff. As the capacity of the pool expands, access to the pool could too.

As the volume expands, such a structure could also provide consumers with more real choice. In 2021, 9 million British households (roughly one third) chose green tariffs (BEIS and The Rt Hon Anne-Marie Trevelyan MP, 2021), indicating a healthy appetite for clean electricity – but many of them still ended up paying the price of gas-powered electricity, sometimes with a green surcharge. Further, exposing the public to the lower cost of renewable electricity could create even greater ‘market pull’ through increased demand for the low carbon fuel. The pool could provide a more stable environment for increased investment in renewables, facilitating deep decarbonisation.



NEA and Fair By Design (2022) *Solving the cost of living crisis*. Available at: https://www.nea.org.uk/wp-content/uploads/2022/07/2022_Solving-the-cost-of-living-crisis_v02.pdf (Accessed: 21 August 2023).

Norman, A., Corfe, S., Kirkup, J. and Powell-Chandler, D. (2023) *Fairer, warmer, cheaper*. Soical Market Foundation, Public First, Citizens Advice. Available at: <https://www.smf.co.uk/wp-content/uploads/2023/03/Fairer-warmer-cheaper-March-2023.pdf> (Accessed: 21 August 2023).

<https://www.ofgem.gov.uk/publications/default-tariff-cap-level-1-july-2023-30-september-2023> (Accessed: 21 August 2023).

Office for National Statistics (ONS) (2023) *Energy prices and their effect on households*