

Dear Nisha,

I am writing in response to the ***Consultation on the Successful Delivery Reward Applications for Low Carbon Networks Fund projects*** with regard to the achievements of the CLNR project in delivering high quality learning that will provide a lasting legacy for the UK's research, utility, innovation and policy communities.

As you will be aware, Durham University was a project partner in the CLNR. Our role at all times in the project was to conduct independent research that could inform and assess the interventions being trialled on the project. Our work is subject to a rigorous process of external peer review, both through the academic publishing process and as a result of the Research Excellence Framework 2014 through which every University Department's research is rigorously assessed for the quality of its outputs and its impact within society, business and government. The work conducted for CLNR is no exception has been subject to the highest standards of academic scrutiny. As such, while involved as partners in the project we are able, and indeed expected, to speak with an independent voice.

Our assessment of the contributions of the project focuses primarily on its unique socio-technical approach and on the findings that have emerged concerning the nature and management of electricity demand with customers.

It is now commonplace to assert that the challenges of changing the electricity network towards a low carbon future while addressing security and affordability are not merely technical ones. But very rarely does the work undertaken by the electricity industry, the regulator or government support innovations that go beyond technical or purely economic interventions. The CLNR project has uniquely in our view been able to adopt an approach in which the capacity to realise new forms of flexibility has been seen simultaneously as technical and social, and has afforded a great number of new insights into how 'social' flexibility might be shaped through different kinds of technical intervention and vice versa.

The work conducted on the flexibility of customers has revealed new and important findings, not least of which are:

- That electricity demand is only loosely driven by socio-demographic factors
- That only income is a significant determinant of the level of electricity demand
- That attitudes towards energy, environment, politics and finance have little bearing on electricity use
- That electricity use is instead closely related to different practices, such that conditions of everyday life (routines, the kinds of appliances people have, their home economies) shape electricity use in fundamental ways
- That customers understand the idea of peak demand and are willing to respond to it
- That customers are able to use a fixed rate TOU tariff and welcomed this proposition
- That EV use is closely tied to work-day routines and could led to network peak problems

The data set produced through CLNR is the largest ever study of UK electricity. It combines information about electricity demand, attitudes and everyday practices in a way that, as far as we are aware, is a unique study in the international context. Given the process of gathering this data and time-lags in the process of writing and getting social science papers accepted (typically over 2 years from first submission to publication) this evidence will begin to circulate in the international research community over the next 1-3 years and we expect that it will have a lasting impact on how these problems are addressed in the future in the UK and beyond.

The work has already attracted considerable interest, with research and policy communities asking for more information, invited talks and so forth. Notably, the Department of Energy and Climate Change have been particularly interested in the work undertaken, and I recently provided them with an expert seminar on our findings. The research also informed the Parliamentary Select Committee on Energy and Climate's inquiry into the smart meter roll out. Through these means, the work conducted by CLNR is having a direct and important effect on how critical UK policy in the electricity network area is being considered and determined.

A critical next step for the CLNR project will be to ensure that its plans for a lasting data legacy can be fulfilled. This is an important resource for the UK's energy research community and will provide the basis for new knowledge and findings that will shape the utility sector, forms of smart innovation and the development of policy over the next decade.

Yours Sincerely,

A handwritten signature in black ink, appearing to read "Harriet Bulkeley". The signature is written in a cursive, flowing style.

Harriet Bulkeley