

Institutional Rhythms: Opportunities for Energy and Mobility Demand Management

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If the UK is to meet its targets for reductions in greenhouse gas emissions by 2050, current levels of energy demand and carbon intensive forms of mobility will have to change, and at a faster rate than at present.

This research takes a distinctive theoretical approach to the challenge of reconfiguring patterns of energy demand and mobility in the non-domestic sector. To date, efforts to reduce carbon emissions associated with energy demand have concentrated on improving the energy efficiency of technologies and buildings, and on persuading individuals and organisations to change their behaviour. In contrast, this research is informed by the view that energy demand is usefully understood as an outcome of social and institutional practices. Understanding, and changing patterns of consumption, consequently depends on understanding and intervening in these institutional arrangements.

The project focuses on how institutional rhythms structure the extent and timing of energy demand, and the extent and carbon intensity of related forms of mobility (commuting, etc.). Its purpose is to assess the scope for changing complex systems of practice to reduce carbon, without compromising the services that institutions provide.

The NHS is the largest public sector contributor to climate change in Europe and is in need of new forms of intervention if it is to meet carbon reduction targets by 2050. It is also a sector that includes complex institutions (hospitals), which are significant employers, which deliver an array of services at different times of day and night. The close relationship between working practices and energy demand means that the success of initiatives to shift peak load, or promote low carbon transport, ultimately depends on the capacity to modify the temporal rhythms of institutional life.

This research integrates recent developments in social theories of practice and time to identify innovative strategies for carbon reduction at an institutional level, aimed at reconfiguring the spatio-temporal arrangements of activities and schedules, and the consequent ebb and flow of people and goods.

Detailed empirical research at two large hospital sites will provide much needed insight into the potential for this kind of innovation. This work will involve a total of 60 in-depth interviews as well as observation and analysis of documents and data relating to energy demand, travel, and to rotas, appointments, schedules and travel plans, used to identify patterns of temporal fixity and flexibility within and between different parts of the hospital. The results of these enquiries will inform an analysis of specific opportunities to reduce carbon emissions on a significant scale through potentially minor modifications to institutional rhythms and working practices.

The insights from this research will be developed and disseminated through a series of 'working parties' initially involving academics and a range of relevant experts from across the NHS and later including participants from a wider range of public and private sector organisations (e.g. prisons, schools, major corporations) which are also in a position to modify institutional patterns of work as a means of reducing carbon emissions. Other output includes a book entitled: 'Rhythms of Energy Demand: Institutions and Practices', six articles, six conference papers, a range of non-academic publications and an online 'project prospectus'.

This project, which is to be located at the DEMAND centre at Lancaster University, shares and extends the core ideas on which that centre is based. The research will enhance DEMAND's existing programme, bringing issues of time and timing to the fore and developing and using cutting edge social theory to address urgent challenges of end use energy demand and carbon reduction in the non-domestic sector.