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Further Reading: Goggins, G., Fahy, F., & Jensen, C. L. (2019) Sustainable transitions in residential energy use: Characteristics and governance of urban-based initiatives across Europe. *Journal of Cleaner Production*, 237, Open Access: <https://doi.org/10.1016/j.jclepro.2019.117776>

Jensen, C. L., Goggins, G. & Fahy, F. (2019) Achieving sustainability transitions in residential energy use across Europe: The importance of problem framings. *Energy Policy*, 112, Open Access: <https://doi.org/10.1016/j.enpol.2019.110927>

Fahy, F., Goggins, G. & Jensen, C.L. (2019) Energy demand challenges in Europe. Palgrave Pivot, Cham. <https://link.springer.com/book/10.1007/978-3-030-20339-9>

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Designing and implementing initiatives for sustainable transitions in residential energy use

Reducing domestic energy use and related carbon emissions is a priority for national and European policy. A transition toward sustainable household energy use will require radical shifts in patterns of production and consumption that can only be brought about through systemic change involving multiple actors across all levels of society. Key considerations include the development, adaptation and diffusion of new technologies, coupled with significant changes in the socio-material organisation of resource-intensive practices including heating and cooling homes, mobility practices, washing, cooking and storing food, etc. However, this kind of systemic thinking rarely translates into policy and planning, which is dominated by a mix of technological, economic and behavioural approaches. This is despite ample evidence that technological improvements alone will not deliver the necessary reductions in carbon emissions to meet climate goals and targeting individuals to change their behaviour brings about limited success. There is therefore an urgent need for new ways of understanding and addressing energy demand concerns.

Research Findings

The way that energy transitions are framed and governed plays a crucial role in determining the type of change that might come about. A review of over 1,000 initiatives in Europe that aimed to reduce household energy use or lower carbon emissions in the residential sector found that over 75% of initiatives understand changing levels of energy use primarily as a matter of technological change or changing the behaviour of individual consumers. Initiatives that understand changes in energy use as requiring complex systemic change are fewer, however they provide important lessons for policy and practice.

Policy implications

We identify key areas where we find evidence of either stratification or integration in the way that the energy challenge is addressed through sustainable energy initiatives. We argue that greater integration across these dimensions can lead to more promising interventions for long-term transformation. Policy efforts need to move beyond relatively simple efficiency-based approaches, such as buying 'greener' products, which were found to be dominant in sustainable energy initiatives. An alternative more integrated approach, orientated to practices and context, is to consider how technological changes could simultaneously bring about sustainable changes in everyday lifestyles by challenging existing norms, routines and ways of doing, as well as focusing on the actor-configurations that underpin sustainable energy initiatives. A practice approach therefore provides an opportunity to look beyond optimization of existing behaviour, to create space to experiment with new more sustainable ways of addressing householder needs and concerns, as well as reshaping collective conventions around energy use.