

People power crucial for low-carbon future, new research shows

May 24 2016, by James Hakner



Power to move towards a low-carbon energy future is in the hands of people and users.

Policy makers must harness the power of ordinary people if society is to transition to a low-carbon energy future, argues a leading technology historian.

New research by Johan Schot, Director of SPRU (Science Policy

Research Unit) at the University of Sussex, shows that viewing people as mere [energy](#) consumers means we risk losing a vast amount of potential in altering society and bringing about the substantive change we need to our existing energy system.

Published in the May edition of the journal *Nature Energy*, the research puts into sharp focus the crucial role different types of 'user-groups' play in helping shift society to a low-carbon system.

The paper - 'The Roles of Users in Shaping Transitions to New Energy Systems' - synthesises findings to outline five key types of users that interplay to create and change technology and society's application of it. Along with his co-authors, Assistant Professor Laur Kanger (University of Tartu) and Professor Geert Verbong (Eindhoven University of Technology), Schot urges Government and policy-shapers to understand this central dynamic and the opportunity it affords. Users are not just consumers – they are creators, influencers and game-changers.

The five main sets that influence change are: User-Producer, User-Legitimator, User-Citizen, User-Intermediary and User-Consumer. Crucially, everyday actions and routines shared by these types, create collective beliefs and expectations that pave the way to shaping a new story for energy, taking what is often a novel niche in society through to its overarching energy regime. Taking the long view, the research shows that utilising user power is fundamental to long term change. The onus on Government should be to create incentives, initiatives and a system that is receptive.

Professor Schot said: "Consumers are often overlooked as important actors that are driving a transition towards a low carbon and highly energy-efficient future. In this process they develop new collective routines which shape further consumer choices on a routine basis. Taking this perspective means that government policies should not only

focus on providing more information and raising awareness but also on mobilising the power of users for combating climate change and reducing energy use."

Five types of energy users who can influence change

- The User-Producers – construct, tinker, amend, exploit, modify and improve technologies by engaging in extensive thinking and learning around the product, process or system. User-Producers are key to the innovation and start-ups.
- The User-Legitimators – These types are intrinsic in creating belief in the fresh technology, system, product or method. They positively inform and affect wider societal beliefs. They help provide knowledge to aid cultural acceptance.
- The User-Citizens – They are the activists, challengers and agents of social change against the current system. They mobilise and contest to carve out the existing structure fuelling the appetite and adoption of the new methods.
- The User-Intermediaries – create, influence and nurture the necessary networks by bringing together the critical producers, users, regulators and organisations. They create credibility which helps 'mainstream' the niche.
- The User-Consumers – these 'lead-consumers' adopt the niche developments early. They change to embed them in their daily routines. By attaching meaning, significance or status, User-Consumers contribute considerably to the positive construction of ideas about the niche within wider society. Therefore, they prompt mass take-up to take it from an innovative niche to fully-fledged regime.

More information: Johan Schot et al. The roles of users in shaping transitions to new energy systems, *Nature Energy* (2016). [DOI: 10.1038/nenergy.2016.54](https://doi.org/10.1038/nenergy.2016.54)

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