Identifying behavioural change interventions that activate individuals to drive the energy transition process

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conclude with several comments on if and how this deadlock may be broken, informed by an analysis based on the multi-level perspective and historical institutionalism.

Walwyn, D. R. 2020. Turning points for sustainability transitions: Institutional destabilization, public finance and the techno-economic dynamics of decarbonization in South Africa. Energy Research & Social Science, 70, pp 101784. doi: https://doi.org/10.1016/j.erss.2020.101784

C.2: Understanding the embeddedness of individuals within the larger system to support the energy transition - prosumer and community issues

Session Chair: Katharina Biely, Delft Technical University, Netherlands, The

Identifying behavioural change interventions that activate individuals to drive the energy transition process

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The speed of energy transition in the Netherlands is low, in contrast to the ambitious 2050 net-zero emissions climate change target. The transition requires the action of 7.5 million households that are still depending on gas supply for heating their homes. The main challenge is not technical, many viable options are already available, but social: people will need to be supported to decide and act.

Based on social contagion theory, when a decision is complex, uncertain, and involves large investments, it only makes sense for someone to act if several others have already acted and experienced positive results. This theory explains the present impasse where everyone is waiting for others to adopt sustainable energy sources, and consequently, nothing happens. The theory consists of three phases (1) identify change-makers (2) activate change (3) accelerate the energy transition. In this paper, we identify interventions that could activate change within energy communities.

The research context is the Austerlitz neighborhood, municipality of Zeist, in the Netherlands. Austerlitz is a mixed neighborhood of around 800 households where about 90% of the houses are privately owned. The homeowners are predominantly older (above 45 years), and most households have children. We conducted 21 interviews on the 4 - 19 March 2021. The interviewees were selected from different house types (bungalows, flats, and two-under-one roof), with varied years of construction. Interview questions were guided by the Capability,

Opportunity, Motivation, and Behavioural (COM-B) change model. The COM-B change model explains how people get influenced to change their behavior, and how they influence others, which weaves into the second phase of the social contagion theory (activation).

Results indicate that homeowners in Austerlitz are highly motivated to renovate their homes to improve comfort, aesthetics, safety, and convenience. Still, many households have not initiated energy transition actions. Current interventions are piecemeal, they focus on opportunities (energy efficiency, alternative energy sources, and financial support), and barely address psychological capabilities and motivation factors (aesthetics, convenience, and comfort).

To boost psychological capabilities and motivation, interviewees recommend more interventions that connect people with their neighborhoods. These may include having 'show' or 'display' houses, installing an energy neighborhood exchange network, and highlighting inspirational stories of residents that have transitioned on the municipality website. To make the energy transition more systemic, interviewees suggested integrating energy transition aspects into existing or future homeowner's renovation plans. We recommend a co-creation process where designers and technical experts help homeowners find innovative solutions for developing and financing home renovation plans that incorporate insulation, ventilation, and the progressive adoption of new energy sources.

We conclude that interventions should enhance homeowners' belief that energy transition is an intrinsic part of their long-term home renovation plans, to motivate them to drive the energy transition process. The suggested approach will enhance homeowners' long-term engagement in energy transition, as the main drivers of change. However, more research needs to be done to understand how social contagion can play a role exactly. What these individual changes can mean for the diffusion of change among a network.

„OUR energy transitions"– experimenting with balcony pv modules for increasing inclusiveness and diversity

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Urban energy transitions need space for learning and experimentation. Such spaces can be created in form of real-world laboratories fostering sustainable development, local co-creation and experimentation. The inclusiveness of these spaces and diversity of people taking part are an important element of these labs, but also a challenging task. Same for the energy transition in Germany which lacks inclusiveness, thus intensifying inherent issues of social justice. Being a task for the society as a whole, it requires the active participation of many, as