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Title:

Obduracy in action: how Dutch local communities transform centralized energy systems

Abstract:

Arguably, the transition to a decentralized renewable energy system requires the transformation of communities. Increasingly, citizens take energy production in their own hands, at household and community level, and in this way turn into 'prosumers'. More and more, citizens pool their resources to start a local energy initiative. In the Netherlands, for instance, more than 500 such local initiatives seek to reshape the energy system in the face of constraints such as cultural and political traditions, legislation, economic and fiscal (dis)incentives, market access, technological constraints, and grid access.

In this paper we reconstruct the activities of 12 local communities in the north of the Netherlands over a period of two years and analyse their approaches to transform the energy system. Our starting point is Actor-Network Theory, which considers technological artefacts as networks of heterogeneous actors and which allows a dynamic analysis of collective strategies. The local socio-technical network we study thus consists of human actors as well as buildings, energy technologies and infrastructures. More specifically, we investigate the *obduracy* and *scripts* of the local environment, and clarify how the local environment resists change and invites specific forms of energy use and production.

A combination of methods is used, such as fieldwork, qualitative interviews, surveys, and analysis of social media. We compare and contrast the approaches of local energy initiatives to transform the energy system. We conclude that local initiatives have to balance actions to open up the energy system, to create new viable scripts; and actions that solidify the local community, to create continuity.