



Original research article

Of expertise, social capital, and democracy: Assessing the organizational governance and decision-making in German Renewable Energy Cooperatives

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ABSTRACT

We examine the unique challenges pertaining to organizational governance and decision-making in Renewable Energy Cooperatives (REC). We find that internal governance frameworks often overrule competing external frameworks, leading to decision-making processes in the RECs that conflict with the external governance framework stipulated by law. Although results were based on a single-country (Germany) analysis of 15 different RECs, the data we gathered from 38 problem-centered interviews and 15 participant observations, when positioned within the broader context of social-political governance, reveal problems and challenges that likely pertain to all RECs. RECs have helped propel the energy transition, and now they are being challenged to integrate their sizable social capital into the broader energy system. Expertise is often called for beyond what a volunteer organization can support. This leads to strains in the democratic approach to decision-making. These strains can be analyzed using transaction cost theory. Efforts at transaction cost minimization lead to decisions being made by the internal governance framework, even though these decisions conflict with the existing governance framework stipulated by law. This perspective yields insight both for policy makers and for REC managers seeking paths to growth.

1. Introduction

The transition to an energy system fueled more and more by renewable sources is under way, supported by an impressive technological advance in the field of renewable power generation. Prices for solar panels and wind turbines fall while their efficiency rises, making them ever more competitive in comparison to traditional power generation. Ambitious goals to raise the share of renewable energy (RE) no longer seem unrealistic. In Germany, RE accounted for more than 30% of all electricity generated in 2016 [1], helping the energy transition or „Energiewende“ become a reality.

For the success of this transition in Germany, not only technological advance can be held responsible. With the Renewable Energies Act (EEG), a FiT scheme combined with a priority grid access, a policy exists that allows for low-risk investment in RE even for individuals, e.g. by putting solar panels on the roof of their homes. Factors like a long tradition of opposition to nuclear power, a strong environmental movement and a high level of income have created a relatively high level of support for RE in German society [33]. RE generation in Germany profits from relatively high retail prices for electricity, adding to its competitiveness. These factors have led to 47% of all installed

renewable electricity generation facilities installed owned by citizens in 2013 [48].

One could add, in the sense of Science and Technology Studies e.g. [15], that German society and its citizens were ‘ready’ for a form of more direct engagement in the generation of RE, namely Renewable Energy Cooperatives (RECs). This engagement offers citizens a way to express their reaction to their perception of energy generation technology systems fraught with risk like coal and nuclear energy. A study by Debor concludes that RECs “seem to be particularly valuable for capturing social needs that are aligned to RE technologies” [9], p. 3. Citizen participation in energy generation has been attributed with a number of positive effects on society and the proliferation of RE Technologies, which is in many cases hindered by the reaction to LULUs (Locally unwanted land uses), such as the NIMBY (Not in my backyard) effect [11]. This effect can be reduced by the participatory function of RECs [2]. Further effects can be educational [37] and by supporting energy democracy [29].

The predominant organizational form of citizen energy in Germany is the REC operating under Cooperative law [48]. With their democratic principle of one member, one vote and low entry barriers (shares for the RECs of our sample are sold as low as 50€) they have been the tool of

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choice for citizens wishing to engage directly in the “Energiewende” and not having the money or the roof at hand for setting up their own facility [43]. RECs have the potential to gather citizen capital and make it available for RE projects. Many members support the development of projects that would not generate sufficient profit to attract investment funds, thus adding a further source of financing to RE proliferation [29], p. 243. As of 2014, there were 973 RECs in Germany, accounting for a total of more than 130.000 members and investments in RE of 1,67 Billion € [12]. These numbers make RECs interesting as a participatory element in the German energy transition process [52]. To further a better understanding of this element, its organizational advantages and shortcomings in the light of policy changes it is important to understand decision-making and governance of RECs.

While there are other participatory models for citizens wishing to engage in the generation of RE [47,35], a comparison of their characteristics would be beyond the scope of this paper which will keep a regional focus on Germany. An exhaustive comparison and definition of the terms and possible business models can be found in Holstenkamp and Degenhart [23]. As RECs count for the majority of Renewable Energy Initiatives [27] in Germany, our research in this article is focused on them.

Typical RECs in Germany have three distinct features that play a crucial role in their governance: They are usually very small organizations (average of 169 members) [12], their financial assets are the deposits of their members and their governing bodies are made up of volunteers with no paid staff [36]. This implies the need to monitor the financial risks closely while going easy on human and financial resources. An REC is not able to divert its financial risks by investing in a number of projects, calculating that the high performing ones level the losses of the failures. In the past, the existing policy scheme with its 20-year guaranteed FiT combined with low-maintenance setup of solar arrays allowed for this low-risk approach suitable for RECs [29].

But policy changes aiming at reducing fixed-tariff support have emerged in Germany that challenge the previous REC business model and have further raised management requirements as management decisions are becoming more complex [22]. RECs find themselves in a predicament of the demands for time-consuming, highly regulated participatory decision-making on one hand while business demands quick, professional decisions on the other hand. To cope with these conflicting demands, we observe that regulations or resource-intensive participation procedures are bent or circumvented on occasions, often being replaced by rather informal procedures that are individual for each REC. As one of the core principles of cooperatives is their participatory, democratic decision-making, this is highly relevant in assessing the resilience of the REC model. Therefore our aim is to find out when and how often governance and decision-making processes shift from the given regulated format to more informal ways in RECs. Closely related is the question what leads to these shifts in REC governance and decision-making.

We apply Kooiman’s concept of Interactive Governance [30] to frame our observations of REC governance and decision-making in action, finding this concept particularly useful to describe the different modes of governance, here called “interventions”, “interplays” and “interferences”, from more formalized modes to informal modes. These categories have been found helpful to describe the real-world situation found in REC governance. As we find that the individual aspects of REC governance all are influenced by the need to go easy on the scarce resources of these organizations, our approach to explain the findings is by the concept of Transaction-Cost Economics (TCE) [50]. As Hansmann [20] points out that collective decision-making in cooperatives is one factor for their high transaction costs, we analyze how RECs cope with that factor.

To the ERSS reader interested in the intersection of energy technologies, fuels, and resources on one side; and social processes and influences on the other side this article seeks to provide insight into the governance of a social phenomenon that has had a surprising success in

Germany. We see a wide possibility to transfer our findings to other contexts, geographical or contextual, as many citizen RE initiatives in other countries show similar characteristics [3].

The article is structured as follows: In Section 2, we develop the conceptual framework which will be used to analyze the findings we made and lead to our research questions. Here, a short discourse about the definition of governance as used in this article is included. Section 3 displays our methods for gathering and analyzing the data, explaining the meaning of qualitative research in the given context. The results are shown in Section 4, concluding that the given framework is being overruled by individual frameworks, illustrated by examples. We discuss our findings in Section 5, evaluating the background of the behavior we observe. We close with directions for further research in Section 6, stressing the need to further investigate how legal frameworks need to be shaped to ensure further REC growth.

2. Conceptual framework

Governance in itself is a very broad concept, used to describe human interaction in fields as diverse as politics as well as organizations of any kind and context. The term “governance” evolved from the verb “to govern”, and at first simply meant “governing.” From there on, the governance idea has evolved into a widespread field of different sub-concepts including political, economic and social governance, of which Mayntz [34] offers an excellent overview. To choose a governance concept fit to describe the discrepancies we observe between a very strict, formalized REC governance as stipulated by German Cooperative Law and the real-world, sometimes rather casual ways of REC governance, we find the governance definition by Höfer and Rommel most helpful:

“[governance is] the sum of mechanisms an enterprise establishes within its boundaries to organize and control responsibilities and authority of its management, governing bodies, and owners.” (2015, p. 52)

This focuses our viewpoint on the internal organization of the RECs and how their parts interact during the decision-making process. To compare these interactions in terms of degree of formality, we need a theory that lets us categorize different modes of governance. This can be provided by Kooiman’s [30] social-political governance concept, which specifically includes the idea of “interactive” governance:

“All those interactive arrangements in which public as well as private actors participate, aimed at solving societal problems, or creating societal opportunities, and attending to the institutions within which these governing activities take place” [30], p. 70.

Kooiman’s concept is widely recognized and used, e.g. by Hughes [25] who acknowledges that it expands the concept of governance so it includes more than just state and society [25], p. 126. While examining the concept of “New Public Governance”, Osborne [39] refers to Kooiman’s concept as “as an over-arching theory of institutional relationships within society” [39], p. 381. In their book on Managing Performance, Bouckaert and Halligan present Kooiman’s concept as one of the standard conceptions of institutional relationships within society when looking at different meanings of governance [5], p. 182.

To approach our second research question, we need a theory that lets us compare the governance styles found in RECs in a way that explains why one is preferred to the other by the REC members. Transaction-cost economics (TCE) [50] provides a useful framework for understanding why such preferences arise. TCE has been widely applied to various governance issues. Grossman and Hart use it as one of the foundations to describe situations where incomplete contracts are being handled [19]. In her book on “Governing the Commons”, Ostrom highlights the importance of the information and transaction costs in organizations [41], p. 242. Following this line of thinking, it is assumed that firms exist because the costs of transacting business are lower

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