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Insa Thimm

THE CONCEPTUALISATION OF CIVIC ENERGY COOPERATIVES AS CHANGE AGENTS IN THE GERMAN ENERGY TRANSITION

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Abstract
Civic energy cooperatives play an essential role in shaping the transformation of the German energy system. They contribute significantly to the decentralised expansion of renewable energy and to the acceptance of the energy transition. This paper aims to shed light on the role of civic energy cooperatives as change agents in the energy transition. A civic engagement approach was chosen because in addition to their economic orientation, civic energy cooperatives are known for their social component with a focus on the common good. The paper will demonstrate the civil society potential of civic energy cooperatives, despite their economic activity and profit motives. The paper will also present the concept of change agents from transformation research and demonstrate the value of the concept for situating civic energy cooperatives within the social context of the energy transition.

Keywords
Energy transition – civic energy cooperatives – civic engagement – change agents

1 Introduction

In the summer of 2011, after the nuclear disaster at Fukushima, the German Federal Government adopted an amendment to the Atomic Energy Act (*Atomgesetz*) which laid the foundation for a national energy transition. The core elements of this are the gradual withdrawal from nuclear energy, the expansion of renewable energy and the improvement of energy efficiency (German Federal Government 2011: 1 et seq.). Together with the liberalisation of the energy market and the discontinuation of electricity concessions, the decision led to the entry of new stakeholders into the energy sector. The involvement of citizens in the energy sector is generally termed

civic energy and has decisively influenced the transformation of the German energy system thus far (Quitzow/Canzler/Grundmann et al. 2016: 163 et seq.). Thus, private citizens and farmers, as pioneers of the energy transition, have built up almost half of the installed renewable generation capacity (Müller/Dorniok/Flieger et al. 2015: 96). Civic energy therefore includes not only enterprising activities by citizens in a sector which was still dominated by a few large companies until a few years ago; it has also made a substantial contribution in the last ten years to a decentralised expansion of renewable energy and to the social acceptance of the energy transition (Lautermann 2017: 99; Klagge/Schmorle/Seidel et al. 2016).

With regard to the energy transition, civic energy cooperatives, in particular, have great significance for the transformation process taking place in society which goes hand in hand with the transition. Depending on the perspective, civic energy cooperatives can be classified at the system, organisational or individual level. In the present article, civic energy cooperatives are examined at the organisational level, since citizens bundle their involvement in the civic energy cooperatives and organise themselves within them in order to shape the energy transition. Although civic energy cooperatives have remained a small group of players, their democratic structure enables them to play an important role in ensuring a decentralised, fair energy transition through civic participation (Müller/Dorniok/Flieger et al. 2015: 96 et seq.). The term *civic energy cooperative* first and foremost defines the form of enterprise and the sector to which it belongs. A general characteristic is that they collect capital from private individuals and thus open up a further source of funding in the energy sector (Radtke 2016: 163). And yet, empirical cases and their various social and organisational arrangements are highly heterogeneous. As well as the types of activity (e.g. electricity production, local heating production and distribution), the number of members, investment capital, regional orientation and cooperative partners also vary considerably (Klagge/Schmorle/Seidel et al. 2016: 243). Empirically, the largest group of civic energy cooperatives in Germany are production cooperatives, which are involved in electricity generation, primarily via photovoltaic systems (Dorniok 2018: 211). The development of civic energy as a whole is generally viewed positively in the media and politics and is considered an expression of a well-functioning civil society (Dorniok 2016: 1). Civil society players are seen as important drivers of changes to social (sub-)systems and therefore also of transformations. As *change agents*, they help to shape social change (incognito in some cases), e.g. by introducing new technologies, ideas and visions (Grießhammer/Brohmann 2015: 17; *WBGU* [German Advisory Council on Global Change] 2011: 242 et seq.).

This paper explores the role played by civic energy cooperatives as change agents in the energy transition. A civic engagement approach was chosen because in addition to their economic orientation, civic energy cooperatives are known for their social component with a focus on the common good. Involvement in civic energy cooperatives is often described as a type of civil society activity, but without exploring the concepts in more depth. This paper will therefore firstly show that the civil society potential of civic energy cooperatives is definitely visible, despite their economic activity and profit motives. Subsequently, the paper will present the concept of change agents from transformation research and demonstrate the concept's value for situating civic energy cooperatives within the social context of the energy transition.

2 Civic engagement in the energy transition

2.1 Stakeholders in civil society

There is no standardised concept of civil society; rather, depending on the theory, certain focal points, understandings and definitions are emphasised (Adloff 2005: 65; Schade 2002: 11 et seq.). In order to illuminate the civil society potential of civic energy cooperatives, this paper adopts an understanding of civil society which permits economic activities in civil society under certain conditions. According to Adloff (2005: 65), civil society fundamentally means 'a social space, namely the pluralist totality of public associations and gatherings which are based on the voluntary, joint activity of citizens'. The typical organisational forms are neither purely state-organised, nor are they based on pure market principles; examples are clubs, associations and social movements. Most conceptualisations of civil society differentiate it from the private sphere, i.e. the family, and its affiliation with the public sphere is emphasised. In addition, civil society encompasses certain rationales for human interactions, which include civil behavioural standards such as tolerance, non-violence, citizenship and public spirit. Moreover, citizens living together in a self-governed, democratic manner that represents a 'utopian moment' is considered to be part of civil society (Adloff 2005: 65 et seq.). The non-profit sector (third sector) is often described in the literature as the organisational infrastructure of civil society, since it can empirically designate the organisations which function as the bearers of civil society. While there are certainly overlaps, the non-profit sector and civil society are not identical (Adloff 2005: 65 et seq.). Evers (2004: 8) argues that the decisive factor for the strength of civil society is not the size of the non-profit sector. Instead, it draws its strength from anchoring the principles of civil society activities outside of this sector as well.

The extent to which economic organisations should be included in the concept of civil society is disputed. Whether a clear dividing line exists between the economy and civil society is firstly dependent on the theoretical underpinnings of the concept, and secondly on the nature of the relationship assumed between civil society and the state. Modern civil society theories do indeed distinguish between state and civil society and, moreover, weight the political dimension of civil society differently. Other theories focus on the rationale of civil society being a differentiated social sphere or connect it conceptually with a rationale for interactions of civil society activity (Adloff 2005: 90 et seq.). According to Adloff (2005: 92), 'civil society activity can be viewed as something that can in principle take place in all realms of society, but that is de facto very rarely found in the realm of the economy'.

2.2 Civic energy cooperatives – stakeholders in civil society?

Energy cooperatives are considered to play an important role in ensuring a democratic, fair energy transition through citizen participation. Thus, civic energy cooperatives are usually contrasted with traditional market players (e.g. large corporations, agricultural energy producers and project developers) and with public stakeholders (e.g. municipal administrations) (Becker/Gailing/Naumann 2013: 46). In addition, cooperatives have always incorporated the idea of self-help, which traditionally belongs

to the infrastructure of civic engagement: 'Cooperative self-help is considered to be an association of at least three people who pursue economic and other goals, stand by each other financially and organise their cooperation democratically' (Alscher 2011: 3). Since cooperatives can encompass very diverse areas of activity and working methods, these can be seen as a link between the market and civil society (ibid.).

For the German nationwide Alliance for Citizens' Energy (*Bündnis Bürgerenergie e.V., BBEn*), 'civic energy stands for a transition to renewable energy based on decentralised structures, which complies with democratic, social and ecological values' (*BBEn* 2018). The following aspects are emphasised:

> Participation by means of the self-determined, autonomous shaping of decentralised energy provision and participative, sustainable economic activity

> Orientation towards the common good, by placing economic aims in the service of social objectives. These include ecological responsibility and the sustainable development of a region, and exclude the maximisation of profit

> The foundation of a common identity and the creation of acceptance by means of mostly regional anchoring and regional creation of values ('from the region, for the region')

> Diverse players, such as private individuals, farmers and different legal entities (e.g. associations, private corporations, energy cooperatives, limited companies, limited partnerships), excluding large corporations

The above shows that civic energy is predominantly characterised by the population's demands to participate in and shape the energy transition, as well as by sustainable, regional economic activity, and that it is directed against the economic model of large corporations. Empirical findings from various studies (trend:research/Leuphana University Lüneburg 2013: 59 et seq.; Leuphana University Lüneburg/Nestle 2014: 21 et seq.; Radtke 2016: 489 et seq.) show that the main motives cited for founding civic energy cooperatives are environmental protection, promoting the energy transition, and striving for independence from supra-regional providers, with financial motives also playing a role. The interest in regional investment or the desire for ethical/ecological investment predominates, such that most investors are willing to forgo yields if the investment pursues particular social or ecological goals. In addition, the majority of civic energy cooperatives are run on a voluntary basis. The common good is also an important aspect for the civic energy cooperatives. Most energy cooperatives were explicitly founded with a regional social commitment in order to generate local participation in the energy transition (ibid.). Blanchet (2015: 247) illustrates this by describing them as 'projects where communities (of place and interest) exhibit a high degree of ownership and control, as well as benefiting collectively from the outcome', '(...) and that strive to bring about both a technological and social change'.

The development of civic energy overall is repeatedly given a positive emphasis in the media and politics, highlighting its significance for the acceptance of the energy transition (Dorniok 2016: 1). However, critics note that it is primarily economically

and socially better-situated population groups that benefit from the investment in civic energy facilities, whereas the financial burden of the EEG levy must be borne by all electricity consumers (Lautermann 2017: 106 et seq.). Indeed, it is predominantly better-educated and higher-earning, middle-aged men who participate in civic energy cooperatives (Radtke 2016: 297 et seq.). In addition, it is difficult for civic energy to address and reach population groups that are distanced from involvement. However, the supposition that non-graduates and low-earners are effectively excluded cannot be confirmed. For example, many cooperatives offer the option of only investing small sums (ibid.). By shifting the focus from the individual level of investors and (passive) members back to the organisational level and by considering the outward strategies of civic energy cooperatives, it becomes clear that they are more likely to overcome than to cause social divisions by their activities. It is therefore inaccurate to speak of an 'energy bourgeoisie' (Lautermann 2017: 107).

Civic energy cooperatives can therefore be considered to be a hybrid form of organisation and enterprise. Despite the very different contexts in which they arise and their different motivations and orientations, civic energy cooperatives are not just characterised by a special economic orientation that serves as their foundation, i.e. the fact that they offer citizens the possibility to participate financially in the energy transition, but they also have social and political dimensions (cf. also Radtke 2016: 139). With this in mind, involvement in civic energy cooperatives represents an example of a fundamentally economic activity which is very strongly linked to the social and political themes and spheres of society. Following this view, civic energy cooperatives can be conceived as organisations of civic activity, since they correspond to a fundamental logic of civic activity on the grounds of their notion of self-help, their democratic structure, the orientation of and towards members, and the focus on the common good.

3 Change agents in the energy transition

3.1 The concept of change agents

The concept of *change agents* offers a point of reference for situating civic energy cooperatives in a social context. In its flagship report entitled 'World in Transition', the German Advisory Council on Global Change (*Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen, WBGU*) underlines the central role of change agents in shaping and implementing transformations (*WBGU* 2011: 242 et seq.). The success of a transformation hinges on whether the change processes are consolidated and lead to a fundamental paradigm shift in the prevailing system. Whereas historical transformations such as the Industrial Revolution were unplanned, the energy transition was initiated deliberately as an intentional transformation of the German energy system. The challenges faced by intentional transformations include forging a social consensus on common goals, the timescale and overcoming resistance (Grießhammer/Brohmann 2015: 13).

In transition theory, change agents are described as niche actors, who use windows of opportunity that open under particular circumstances and thus enable the dissem-

ination of (social) innovations (Ahaus 2017: 181). The concept of *niche* has been specified in the *multi-level perspective* (MLP) from innovation research: 'Niches create special conditions for new technologies, which would not be able to succeed under market circumstances due to their low technical or economic performance' (Doci/Vasileidou/Petersen 2015: 87). Although the focus in MLP is on technological innovations, the interrelationships between technological, ecological and cultural change processes are emphasised (Geels 2002: 1257 et seq.). With regard to civic energy, co-shaping the energy transition to the extent of self-sufficiency and taking over networks can be understood as social innovations, particularly when considering the very pronounced tradition of centralised energy production and supply by a few large stakeholders in Germany. At its core, this innovation comprises both the ecological guiding principle of establishing a new technological and economic approach to energy supply, and the implementation of this idea by a pluralist, citizen-centred constellation of players (Dorniok 2018: 214; Mautz/Byzio/Rosenbaum 2008: 82).

The term *change agent* originates in diffusion research and was first used by Rogers (1986: 28), who describes innovations using a series of individual empirical investigations. According to him, the diffusion processes and adoption speeds of innovations are dependent on the so-called

> (technology) pioneers (located at the beginning of the innovation process),

> early adopters (who adopt new innovations from the pioneers),

> opinion leaders (who disseminate relevant information about the innovations) and

> change agents (who influence innovation-relevant decisions made by other players)

(cf. also Mautz/Byzio/Rosenbaum 2008: 66 et seq.). Rogers (1986) describes a change agent as 'an individual who influences clients' innovation decisions in a direction deemed desirable by a change agency' (Rogers 1986: 28). The initiation, organisation and shaping of the social process of diffusing an innovation is characteristic of change agents. This distinguishes them from opinion leaders, who do not actively shape ideas but function as facilitators (Mautz/Byzio/Rosenbaum 2008: 69). However, Rogers bases his diffusion theory almost exclusively on examples of technological innovations, leaving social and cultural effects under-explored (Sommer/Schad 2014: 49). In addition, Rogers locates change agents in a top-down understanding which particularly concentrates on governmental institutions or companies as the change agencies on behalf of which the change agents act as experts (Ahaus 2017: 183). Kristof (2017: 168 et seq.) has developed another concept of change agents which has received a great deal of attention. This is based on an understanding of change agents similar to that of Rogers, but her 'promoter model' distinguishes between four different promoter roles:

> Expert promoters (who initiate change processes and contribute their expertise and knowledge)

> Power promoters (who possess resources and can successfully promote change processes on the grounds of their position)

> Process promoters (who define problems and shape and communicate processes)

> Relationship promoters (who support change processes by means of their network knowledge and relationships)

Essential factors for the initiation of successful change processes are deemed to be the qualification of change agents and the cooperation of promoters with different roles (cf. also Ahaus 2017: 183).

In the transmission of the concept of change agents into interdisciplinary sustainability research thus far, change agents, following Rogers (1986), have been described as mediating actors for the introduction of renewable energy (Mautz/Byzio/Rosenbaum 2008) or as highly visible experts in environmental protection (Kristof 2017). Sommer and Schad (2014: 48 et seq.) describe a reduction of the concept to these two groups of people as inadequate, since transformation into a sustainable society necessitates a social and cultural change and the broad participation of the population. Accordingly, far-reaching change processes are substantially dependent on the acceptance and participation of society (Heins/Alscher 2013: 121).

The German Advisory Council on Global Change adopts a perspective which could be adapted to civil society (*WBGU* 2011: 243 et seq.). It describes change agents as individuals and small groups who actively promote transformation processes and create an alternative practice to the established paths. Thus, change agents not only effect changes in their immediate environment but trigger comparatively large-scale transformation processes decentrally and 'from below' by finding imitators and stimulating others to change their behaviour. According to the German Advisory Council on Global Change, the effectiveness of their activities is generally dependent on four elements: 'A certain social outsider position, the linking of several knowledge areas, the integration into a supportive network, and the respective era's favourable opportunity structures' (*WBGU* 2011: 244). Civic energy cooperatives are described here as an example of change agents in the energy transition. The German Advisory Council on Global Change (*WBGU* 2011: 249) also allocates private sector stakeholders a role as change agent under certain circumstances: namely insofar as, in addition to economic interests, an orientation towards the common good is discernible and sufficient material effects are produced for a sustainable mode of economic activity. However, this focuses on technological innovations, particular in relation to renewable energy, energy efficiency and electric mobility.

Ahaus (2017: 183 et seq.) transfers the approach of change agents to the local level of civil or civic engagement. He thus distinguishes the involvement of citizens from the rather top-down view of Rogers and Kristof, who look more at professional *change*

agents and highly visible experts. Ahaus and Welbers (2015: 7) describe change agents as 'stakeholders in local civil society who proactively promote the introduction and use of social innovations in relation to climate protection and sustainability' (ibid.). According to this understanding, change agents are individual players who expedite the introduction and use of social innovations in relation to climate protection and sustainability. In the following, civic energy cooperatives will be situated in relation to the approaches presented above.

3.2 Civic energy cooperatives as change agents

Individuals who act as change agents are at the centre of all the concepts presented in section 3.1. However, when conceptualising civic energy cooperatives as change agents, it is useful to consider the perspective of the organisational level described in the introduction: in civic energy cooperatives, at least three people bundle their interests, which are represented outwardly as a single position. According to this assumption, the concept of change agents offers different approaches for classifying civic energy cooperatives as transformation players. The pioneering phase of civic energy cooperatives took place in the 1970s, triggered by the reactor accident at Chernobyl, the anti-nuclear power movements and the Agenda 21 movement. These early foundations had a strong ecological background and were inspired by social and political changes (Dorniok 2018: 220). 'In many cases, it was these pioneers from the early wind power, photovoltaic and biogas projects who then also grew into the active role of "change agent" which is important for the dissemination of innovations' (Mautz/Byzio/Rosenbaum 2008: 67). Thus, civic energy cooperatives bring both alternative technological possibilities for the production and distribution of energy and decentralised and participatory decision-making structures into the existing system (Dorniok 2016: 8). However, with over 900 energy cooperatives listed in the commercial register, the foundational boom of civic energy cooperatives largely ground to a halt in 2014 due to legislative reforms: the amendment of the Renewable Energy Act (*Erneuerbare-Energien-Gesetz, EEG*) in 2014 created obstacles for civic energy cooperatives trying to initiate new projects in the electricity sector. Although the German Federal Government wishes to retain the diversity of players in the energy sector, the replacement of previously guaranteed feed-in remunerations with tendering procedures for electricity generation capacities removed the favourable conditions that were essential for civic energy as a whole (Ohlhorst 2018: 103 et seq.). In 2016, civic energy comprised 42% of the ownership of renewable energy plants in Germany. This was down four percentage points from the previous survey in 2012, which can largely be ascribed to the proportionate increase in larger companies. In the on-shore wind power sector, the share of installed civic energy capacity fell by as much as 9% compared with 2012, while the number of energy providers rose by almost 4% (*AEE* [Renewable Energy Agency] 2018). Civic energy cooperatives therefore face the challenge of developing business models that are sustainable in the long term (Beermann/Tews 2017: 130 et seq.; Klagge/Schmorle/Seidel et al. 2016: 255).

What role do civic energy cooperatives therefore play as change agents in the German energy transition? Fischer and Kucharczak (2017: 5) point out that the success of the cooperatives' contribution to the transformation of the energy system

is not only measured by changes on the macro level, i.e. the share of the installed capacity from renewable energy or the amount invested, but that change impulses at the meso and micro level should also be taken into account. These include changes to stakeholder constellations, effects on other energy policy players, and the expansion of the collective capacity to act. In the context of the promoter model of Kristof (2017), the constellations of players as process, expert, power and relationship promoters, and their strengths and weaknesses, are decisive (cf. also Ahaus 2017). By means of existing and newly formed (local) networks, civic energy cooperatives come into contact with other stakeholders from civil society, the economy, politics and administration. As well as the expert knowledge which they have gained through their qualifications and, in some cases, longstanding networks, they also often have local knowledge which they can use to implement their projects. At the same time, their networks make them visible in the media. Above all, because of the changed (legal) situation in Germany, organised lobbying and political awareness training by umbrella organisations as well as the professionalisation of existing civic energy cooperatives have gained in significance (Lautermann 2017: 102). Power promoters can be found predominantly among politicians, who set the overarching framework conditions for the development of renewable energy and access to civic energy (cf. Canzler 2017: 33 et seq.). However, it can also be observed that change agents themselves can adopt the role of power promoters on the basis of their increasing establishment and diffusion (Ahaus 2017: 197).

In the conceptualisation of civic energy cooperatives as change agents, in addition to their civil society potential and their sustainable, ecologically-oriented mode of economic activity, they are characterised by their close networking with other civic energy cooperatives, as well as cooperation with other players from politics and the economy. Rogers and Kristof, however, use the term 'change agents' to describe highly visible experts in governmental institutions, NGOs or companies who promote social change processes through their position (cf. Sommer/Schad 2014: 49). For a consideration of civic energy cooperatives as stakeholders in a socio-technological energy transition, however, this orientation is inadequate. Indeed, the development of civic energy cooperatives has shown that the people who participate in them usually organise themselves voluntarily and initiate change processes from below. Diffusion paths therefore comprise horizontal imitation processes within civil society or winning over power promoters in politics or civil society. Sommer and Schad (2014: 49) also argue that the visibility of stakeholders as local change agents should not be limited exclusively to material/social structures, but rather should also include the mental dispositions, orientations and values of the protagonists. This can be linked to the civil society potential of civic energy cooperatives (democratic membership structures, participation, orientation towards the common good, ecological responsibility, the notion of cooperative self-help) (*BBEn* 2018).

4 Conclusions and outlook

Despite their economic activities and profit motives, the involvement of citizens in energy cooperatives corresponds to a fundamental logic of civil society action on the grounds of their democratic structure, membership orientation and focus on the

common good. In particular, the pioneering phase of civic energy cooperatives can be situated as civic engagement on the grounds of its vision for energy policy. Given the current diversity of forms of civic energy cooperatives and the latest developments with regard to the framework conditions established by the government, it is not constructive to generalise about civil society stakeholders. It remains to be seen to what extent these developments will necessitate a stronger focus on economic activities and what effects this will have on the social/civil society aspects of civic energy cooperatives. It is possible that the relationship between civic energy cooperatives and civil society will need to be reconsidered accordingly. The conceptualisation of civic energy cooperatives as change agents enables their hybrid nature between entrepreneurship and an orientation towards the common good to be captured.

The literature focuses strongly on questions of participation and increasing acceptance by means of the participation of citizens in energy cooperatives (for a comprehensive overview, see in particular Radtke 2016: 25 et seq.). Heins and Alscher (2013: 123 et seq.) critically point out that earlier examples of civic participation in relation to environmental and climate protection were often relatively short-lived – or that, despite their willingness to participate, citizens withdrew their involvement due to protracted political decision-making processes. Situating civic energy cooperatives as change agents offers an alternative or another dimension to civic participation in the energy transition. This opens up a new perspective for energy research, since the focus is shifted from the level of (passive) members and investors to the management of the cooperatives, which networks and enters into an outward exchange with other stakeholders, creating collaborations. Civic energy cooperatives thus not only constitute a low-threshold model for the participation of citizens in the energy transition, but, as new stakeholders in the energy system, offer new possibilities for cooperating with other stakeholders such as local authorities for the purpose of sustainable regional development.

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