***Energy communities: identities and scale orientation***

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## Overview

In this paper, we look at scaling preferences of renewable energy communities (RECs) from an organizational and social identity perspective. In the energy transition, renewable energy communities could offer an alternative form of organizing to the centralized and hierarchical organizations that have dominated energy production and supply (Berka & Creamer, 2018; Capellán-Pérez et al., 2018). Although growing, renewable energy communities have proven vulnerable and community renewable energy remains a small percentage of currently intalled renewable energy capacity (Seyfang et al., 2014). We use data from an original survey of French renewable energy community members and test the dependence of REC members’stated scaling orientation on member characteristics including their social identity type (Fauchart & Gruber, 2011). We find a demographically homogeneous membership whose motivations are not materialistic. French RECs have a predominantly alternative-energy and place-bound organizational identity. Its core members prefer scaling up locally over diffusing their model to other localities. We find some evidence that the perception of an “identity gap” between core values and results motivate scaling. In the end, we suggest that homogeneity of member social identity creates an organizational identity trap that may hinder REC scale-up.

## Energy community scaling and organizational identity

Extant literature found that the barriers to REC scaling are both exogenous and endogenous. Exogenous barriers include their strong dependence on the national policy and legal framework (Mirzania et al., 2019), lack of adequate rules for grid connections (Bolinger et al., 2001) and the biophysical conditions that impact the availability of local renewable energy production (Kooij et al., 2018). As for endogenous barriers, previous research has stressed the drawbacks of RECs’ dependence on voluntary member participation. Moreover, previous research also suggests that RECs do not wish to scale up (Ruggiero et al., 2018; Seyfang & Smith, 2007).

Previous studies show that RECs have adopted diverse scale-up strategies (André & Pache, 2016; Bauwens et al. 2020): *scale up* by continuing to develop similar projects, *scale out* by diversifying their activities, *scale across* by becoming models for other RECs, and *scale deep* by improving their operations.

Strategic decisions, including those about scaling, are related to founder social identities. Fauchart & Gruber (2011) distinguish three distinct founders identities: Darwinians, for whom the organization is a commercial object; communitarians, for whom the organization is a social object to support their community; and missionaries, who see their organization as a political object to advance a societal cause. We borrow this typology for this study to see if it can explain REC scaling preferences. The typology of founders may be applicable to members in RECs because RECs are often governed by one-member-one-vote decision making.

Organizational identity (OI) is the members’ collective understanding of its defining features. It emerges in part from (and acts on) individual members’ social identities. RECs may naturally attract members with a similar social identity resulting in a rather homogeneous group of members. OI can be both a source of resistance to organizational change and result in a preference for scaling modes that allow the OI to be preserved. On the other hand, OI can create an impetus for change if members perceive a gap between the current OI and their ideal OI.

We posit that REC identity affects a REC’s relationship to scaling.

## Methods

We conducted an original survey among REC members in France. Since France adopted the *Energy transition for green growth act* in 2015, the number of RECs has tripled (Energie Partagée, 2019). Changes in policy support schemes are now pushing RECs to undertake bigger projects.

The survey aimed to capture REC members’ many motivations for joining their community, their ideas about the present and future of their REC, and their sociodemographic characteristics. We obtained responses from 250 members or shareholders from 73 RECs. We use descriptive analysis to profile the REC membership and econometric analysis to relate the responses on scaling modes to member identity variables. For the latter we estimated multinomial and ordered logit models.

We used respondents’ motivations to join their REC to classify them according to the social identity typology of communitarians, missionaries, and darwinians that Fauchart & Gruber (2011) developed for start-up founders. We also distinguished between core and peripheral members according to their stated level of involvement or role in their REC.

We treat the RECs as one organization with one membership. To allow this, we chose to increase the homogeneity of the RECs and only include those with the dominant combination of main technology (solar-PV) and governance model (one person one vote) (Sebi & Vernay, 2020). This reduced the sample a little.

## Results

Descriptive survey results indicate that the members of French RECs are quite homogeneous, both demographically and in terms of social identity. Few show concern for private materialistic gains, which may be a consequence of economically unfavorable institutional conditions. When asked to choose their three main motivations to join the REC, 80% did so to promote local and citizen energy production, 46% to limit global warming and 35% to create an alternative to fossils. The motivations show that REC members have either a communitarian or missionary social identity; there are very few ‘darwininans’.

Energy transition and citizen involvement also come out as the two most important values and main missions of the RECs. From this, we can characterize the RECs’ organizational identity as tied to place and alternative energy. Indeed, 71% of the respondents “totally agreed” that the territorial anchorage of their REC is clear. Besides, members tend to prioritize activities that they can do independently or in interaction with other RECs instead of in partnership with incumbent actors (better communication with ‘neighbors’ of REC projects, recruiting new members, raise awareness, and share competences with other RECs).

The local identity returns in the econometric results, which show no statistically significant relationship between preferences for different modes of scaling and social identity categories (communitarian vs. missionary), but core members differ from peripheral members: core members are less likely to expect their REC to serve as a model for other RECs. Among the core members, men, unemployed people, and people with a master’s degree seem overrepresented. Scale-up is favored more by those who perceive a larger energy transition ‘identity gap’ (discrepancy between REC core value and perceived REC performance).

## Conclusions

Whereas a strong REC identity seems a necessary condition for its creation and the recruitment of members to develop energy transition solutions, it may become a barrier to its scaling up. French RECs appear to have a strong and rather homogeneous identity because of the interplay of contextual and social identity factors. Members are almost exclusively norm-driven. For a lack of profitability, a place-bound alternative-energy organizational identity emerged, which is embodies by REC core members. This dominant organizational identity would be threatened by a scaling modes that push it beyond its local community. It has little interest in the growth of community renewable energy as a movement, and, in the current institutional context, may discourage differently motivated and differently skilled members to join.

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