



Ecopreneurs, rural development and alternative socio-technical arrangements for community renewable energy



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1. Introduction

The aim of this paper is to contribute to study of the relationship between social innovations concerning renewable energy and rural development. The energy transition currently under way can ideally offer new development opportunities for rural areas, with their abundance of renewable energy sources (sun, wind, water) and land availability. As highlighted by Kitchen and Marsden (2009), rural areas are crucial arenas to promote the 'eco-economy' defined as a local development model with renewable energy as one of its main pillars. This is especially true when decentralized community-based forms of renewable energy production and management are implemented. Indeed, in many countries rural areas are the preferred place for the emergence of so-called Community Renewable Energies (CRE) (Osti, 2013; Kaphengst and Velten, 2014). CRE is an umbrella term used in the literature to denote a variety of innovative experiences of renewable energy development and provision characterized by various degrees of public participation in project development and by the intention to deliver various community benefits (Walker and Devine-Wright, 2008; Rogers et al., 2012). As highlighted by Walker (2008), the form that CRE can take varies from the financial, organizational and legal points of view. It may include green energy cooperatives owning the energy infrastructures, as well as the co-ownership and

co-management of green energy projects by local communities, enterprises and local government. Community initiatives may focus on energy production alone or also on provision (Schreuer and Weismeier-Sammer, 2010). Moreover, they may combine renewable energy generation with behavioral initiatives and energy efficiency measures aimed at the local population (Seyfang et al., 2012).

Studies on CRE have stressed the multiple environmental and social benefits of decentralized energy developments. In general, CRE have been considered forms of niche-based social innovation with wider significance for the emergence of forms of transition to environmentally more sustainable socio-technical systems (Seyfang and Smith, 2007). Particularly in regard to rural areas, the literature has highlighted that because this kind of eco-social innovation, unlike large business-led initiatives, strengthens the local control of territorial resources and draws on local knowledge and networks, it can also address local economic development issues (Gubbins, 2007; Hinshelwood, 2001; Hoffman and High-Pippert, 2010; Kalkbrenner and Roosen, 2016; Rogers et al., 2008). Consequently, renewable energy technology and policy measures can become means to promote the welfare systems of rural areas especially amid an economic crisis when public welfare resources are increasingly curtailed and local communities are at risk of further impoverishment.

Furthermore, because CRE are characterized by the common management of natural resources and technology, they may also have positive effects on rural community cohesion, common identity and social trust (Rogers et al., 2012), which are also key resources to push development opportunities.

The literature on CRE has mainly considered Northern European countries (e.g. Denmark, Germany, the Netherlands, the UK), while it has stressed that Southern European countries lag behind in community initiatives in the energy sector. This is generally attributed to less income available for investment, lower environmental concerns, and a lesser development of renewable energies. Although this explanation points up some key problematic issues, it oversimplifies the complexity and diversity of the spaces, places and trajectories of energy transition in Southern Europe.

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As regards Italy, as highlighted by Magnani and Osti (2016), community initiatives in the energy sector have until recently been largely limited to one territorial area with distinctive ethnic/cultural features: the German-speaking mountain region of South Tyrol (see Wirth, 2014). However, in the past five years or so new community initiatives on renewable energy – especially solar PV and wind – have emerged in other regions in response to a very generous renewable energy policy (Magnani and Osti, 2016; Romero-Rubio and de Andrés Díaz, 2015; Brondi et al., 2014).

This paper seeks to remedy the lack of empirical research on these initiatives by focusing on three case studies of community energy projects in three different geographical areas of Italy. In particular, it considers a case study concerning the North-East Alpine region of Trentino, one concerning the Southern region of Basilicata, and one concerning the central Apennine region of Abruzzo. All three are somewhat marginal territorially in that they are mountain areas with – albeit to different extents – such development problems as population loss, unemployment (especially among young people), low income, and loss of services. However, they differ in many respects, so that comparison among them is particularly interesting. The differences primarily concern the initiators of the projects: different types of ecopreneurs, private and public, and with diverse views on the role of energy in local development. The differences also concern the local energy landscape – i.e. the assemblage of natural, cultural, and organizational features around energy specific to each locality.

In general, the aim of this article is to investigate the social dynamics of agency and network-building involved in the development of renewable community energy in these diverse rural areas.

The paper is organized as follows. It first explains the theoretical and methodological framework used to complement the literature on CRE with specific analysis of ecopreneurs and energy innovation in rural areas. Each case is then analysed in regard to the social and physical characteristics of its territorial context and the way in which community renewable energy has been differently conceptualized and practiced. Finally, comparison among the three cases will yield more general conclusions on the contribution of different forms of community renewable energy to sustainable rural development.

2. Theoretical and methodological framework: ecopreneurs and processes of re-territorialization in CRE development

The extant literature on CRE considers two macro groups of factors as crucial for the development of alternative decentralized energy innovations. On the one hand, attention has been paid to the presence of key committed individuals and leading actors with the skills and information, as well as the economic capital and trust, to develop supportive partnerships and networks (Seyfang et al., 2012). On the other hand, the literature has stressed the importance of local institutions, both formal (e.g. financial support schemes, land-use policies), and informal (e.g. energy cultures, community social capital, norms of locality and responsibility) (Schreuer and Weismeier-Sammer, 2010; Wirth, 2014). Moreover, recently stressed has been the need to add to these factors shaping the energy transition the influence of space and place, as well as localities and ruralities (e.g. Neal, 2013; Osti, 2013). In particular the concept of ‘energy landscape’, understood as an assemblage of cultural, social and geographical features concerning energy production and consumption across space, has been suggested (Bridge et al., 2013; Devine-Wright, 2011). The relationship is reciprocal. Not only does the energy transition induce a transformation of the landscape but the landscape itself can condition renewable energy innovation.

In order to contribute to this literature, the present paper investigates the relationship between energy landscape and individual innovators involved in CRE development in rural areas. It will do so by drawing critically on the literature on ecopreneurs. According to Gibbs (2009, p.65). Ecopreneurs can be defined as ‘those entrepreneurs who combine environmental awareness with their business activities in a drive to shift the basis of economic development towards a more environmentally friendly basis’. Studies on ecopreneurship investigate the role of innovative individuals and organizations – private as well as public – as agents of ecological modernization (Beveridge and Guy, 2005). They seek to understand the nature of such actors and how they interface with and transform their surroundings (ibid., 668).

The literature on entrepreneurs has mainly focused on developing different typologies of ecopreneurs. In particular, Linnanen (2002) identifies four types of ecopreneurs on the basis of their desire to change the world and their desire to make profit. A more complex typology is proposed by Walley and Taylor (2002). They combine personal orientation/motivation – from economic to sustainability-focused – with structural influences – from hard to soft – and identify four further ideal types of ecopreneurs.

The main criticism brought against these traditional studies of ecopreneurship is that, with their overemphasis on the personalities and qualities of specific types of individuals, they furnish a narrow picture of the process of environmental innovation and environmental change. In particular, they fail to address ‘the interplay of competing discourses of business and the environment, the flow of national and local technology politics, the trade-offs, compromises, deals and conflicting visions that constantly frame and reshape innovation processes’ (Beveridge and Guy, 2005, p.672). In order fully to understand the importance of ecopreneurs, therefore, environmental innovation needs to be viewed as ‘the process through which actors negotiate identities and relationships that will allow for the emergence of new sustainable practices in very specific contexts’ (ibid., p.675), rather than as the mere result of powerful personalities.

In this paper we try to apply this approach to three cases of CRE developed in three rural areas of Italy. These will be analysed as particular socio-technical configurations (Bijker and Law, 1992; Devine-Wright and Wiersma, 2013) that have emerged in specific energy landscapes as a result of processes of negotiation and networking by different ecopreneurs – holding particular views, rationalities, knowledge and skills concerning community renewable energy and local rural development – with other actors and organisations in the sector, as well as with renewable energy technological artifacts and with different institutional contexts.

This will also allow us to explore whether and to what extent ecopreneurs allow a process of re-territorialization of energy. Indeed as stressed by Urry (2014, p.4) until the XIX century energy was mostly localized since it was mainly produced by the muscle power of humans and animals, wind, water and the burning of charcoal. This ‘energy-localism’ changed significantly as the fossil fuels of coal, gas and oil started to be deployed. As a result the forms through which ours societies are ‘energized’ became increasingly invisible to citizens and users especially in the case of large and distant sources and infrastructures. Thus in relation to this, re-territorializing energy refers to the process of producing a new visibility (Mubi Brighenti, 2010). This means to produce new relational, organizational and technological territorial arrangements to re-embedded energy in local relationships and meanings.

In order to analyse these processes, the methodology adopted in the research reported in this paper was qualitative. The empirical research in each of the three case studies was based on the following: semi-structured interviews with the leading actors initiating the project and with key participants; participation in the

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