



Original research article

Beyond top-down and bottom-up: Hybrid governance in renewable energy communities in Italy

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ARTICLE INFO

Keywords:

Renewable energy communities
Hybrid governance
Intermediaries
Energy justice
Non-urban contexts
Scaffolding arrangements

ABSTRACT

Renewable Energy Communities (RECs) are organisational configurations in which civic, public and market actors coordinate the production and shared use of renewable energy. While earlier scholarship interpreted these initiatives through a top-down/bottom-up dichotomy, more recent research has highlighted the growing relevance of hybrid governance arrangements that combine these organisational principles. However, limited attention has been devoted to the structural conditions that enable such hybrid governance arrangements to stabilise and operate in contexts characterised by regulatory volatility, administrative complexity and infrastructural constraints. This article introduces the concept of scaffolded hybrid governance, interpreting hybridity as a layered configuration sustained by institutional, organisational and infrastructural forms of scaffolding. Institutional scaffolding provides legitimacy and access to resources; organisational scaffolding redistributes competences and mediates between participation and professionalisation; infrastructural scaffolding renders energy sharing practices calculable and governable. Within these processes, intermediaries play a central role in coordinating actors and linking community initiatives with broader institutional, technological and financial systems. Drawing on a qualitative comparative case study of three Tuscan Renewable Energy Communities characterised by diverse actor configurations within a shared national framework, the article shows how different combinations of scaffolding shape the consolidation of hybrid governance in non-metropolitan contexts. In doing so, it shifts attention from organisational typologies to enabling architectures. The findings reveal how hybrid governance simultaneously enables collective action while generating new dependencies and asymmetries. More broadly, the article offers analytical tools to investigate the structural foundations of energy transitions and their implications for energy justice.

1. Introduction

Renewable Energy Communities (RECs) are collective energy initiatives through which diverse actors organise around the production, management and shared use of renewable energy [1]. At the European level, networks such as REScoop¹ have played a pioneering role in promoting cooperative principles, including “one member, one vote”, voluntary participation and the local reinvestment of revenues. Rooted in these principles, RECs have been formally recognised in the European Renewable Energy Directives RED II and RED III [2,3] as autonomous, non-profit entities aimed at generating collective benefits [4].

Despite this, RECs take on diverse organisational configurations shaped by national regulations, local institutional contexts and market conditions [5,6]. Recent reviews show that this diversity extends to the adopted technologies, governance models and energy sharing mechanisms, resulting in a multiplicity of operational trajectories across Europe and beyond [7,8]. The literature has also highlighted how energy innovations are embedded within the institutional, cultural and economic environments in which they develop, reflecting varying combinations of cooperative, public and market logics [9–11]. Such variability constitutes a structural feature of collective energy initiatives. Nonetheless, RECs have long been interpreted primarily through a

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¹ REScoop (Renewable Energy Sources Cooperative) is the European federation of renewable energy cooperatives. Founded in 2013, it brings together energy cooperatives from various European countries with the aim of promoting collective ownership and participatory management of renewable energy. REScoop.eu represents the energy community movement before EU institutions, provides technical and legal support to its members, and fosters the exchange of best practices and cooperative models for the energy transition.

<https://doi.org/10.1016/j.erss.2026.104904>

Received 18 November 2025; Received in revised form 15 July 2026; Accepted 27 July 2026

Available online 4 August 2026

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