

IDENTIFYING COMMUNITY INCLUSIONS OF RURAL SOLAR PV PROJECTS IN CO-OWNERSHIP MODEL

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Overview

The concept of ‘community’ has a wide-range of ways and is challenging to define, in which it is notable to consider the sizes, levels, and process of social norm development to have community engagement (Peter et al., 2010 p.14). The ‘community’ term has been tailored to the energy sector and emphasized with the emergence of community energy. A number of studies show a significant intercourse between ownership scheme and the implementation process of decentralized community energy projects (Gorrano-Albizu et al., 2019). Ownership was identified as one of the determinant aspects to increase the participation of local communities, particularly in rural areas (Kalkbrenner and Roosen, 2015). However, little of them explores the extent to which degree of participation of the community in particular ownership models in energy transition projects. The rationales for local community engagement within the renewable energy project might be encouraged by the expected outcomes from the project to multiple stakeholders (Goedkoop and Devine-Wright, 2016), mainly by the financial issues which is considered as a primary contributing factor in successful low-carbon energy initiatives (Li et al., 2013). The narratives of community energy and ownership across the world also have different experiences and motives. In community-based energy project, community participation depends on agreement and contract which the involved actors community agree, for instance community energy project in Europe emphasizes not limited to social inclusion, but also financial inclusions, which local community organizations invest and run the project (Cohen et al., 2021). Therefore, the implementation of ownership model in community energy can be varied in terms of arrangements, structures, and level of inclusivity. In addition, willingness of community to participate is also connected with the extent to which participation level is opened and accessible for community. Social expectations, for instance, can be important aspect which influence the community expectations and participation roles which the locals want to involve (Kalkbrenner and Roosen, 2015). In that case, this paper identifies the degree to which this category of ownership model influence degree of participation and how it handles the localization of technology to the local actors. This study examines the relationship between the particular ownership model and the community inclusion in the context of co-owned energy project in rural areas in partnership with private sector.

Methods

This study will draw two main approaches; survey questionnaire and in-depth interview; not only to investigate various types of social inclusion which the community takes involves, also financial inclusion which is either generated by the project installation or constructed by the local community as the recipients. The semi-structured interviews will also aim to illustrate the business opportunities obtained by rural communities as responses towards the solar PV generation in their areas. Collected data is analyzed using qualitative data analysis namely NVivo. Through drawing an approach of six participatory business models in energy sectors, this study applies a characterization tool to determine types of business model in the field study (Lennon et al., 2019). This research selects a particular project as a case study, where it is located in Karampuang solar PV project in West Sulawesi province, Indonesia. This is in order to provide more details with regard to specific social phenomenon study (Mfinanga et al., 2019).

Results

The study shows that community participation in the co-ownership model of energy transition projects is predominantly emphasized on social inclusion rather than financial inclusion. Despite of increasing number of community solar PV project in rural areas of Indonesia, the significance of community participation in a practical is still poor during the transition process. Community inclusion is primarily influenced by the interest and the authority of powerful stakeholders, in which they have a finite option and depend on the arrangement contract between government and private sectors as the dominating actors, for instance mandated government and private developers of the energy project. Community expectations and willingness to participate are followed with certain restricted contracts of the project, particularly a project financed by an international donor organization and mandated as a

national energy project. Community participation in the aspects of legal and financial inclusions are narrow, in which the community is merely invited to formal stakeholders meetings held by authorized stakeholders, yet in terms of controlling and final decision-making is still in the authority of the national government. Government primarily plays the role of final decision-makers in terms of administration and bureaucracy. In addition, the private sector involves as a project commander in the context of technical, operational and management aspects in the project field.

Conclusions

The context of community participation degree in community energy is not always conformable to the conjecture of ‘community’ in community energy. Despite its application of the co-ownership model, in which the community shares the ownership with the private sector, it is predominantly led by the private sector as the authority. The power to influence certain actors seems to have significant leverage in the implementation of co-ownership models. The notion of ‘community participation’ in co-owned energy projects is merely black-and-white. Communities tend to be confined to have direct involvement from pre- to post-installation of energy projects and asked for the bureaucracy's consent at the beginning. Community inclusion is ambiguously defined in community energy projects under co-ownership scheme. Despite of the ownership model is co-owned energy project between community and private sectors with the share sharing system, community participation technically is lesser spotted in the implementation. Overall, this study aims to understand further and contribute to the literature on the underpinning relevance between model of ownership and the degree of community participation. It specifically focuses on case study of co-ownership models of rural energy projects. The adoption of the community inclusion notion in the community-energy model needs to be asserted in the way that the community has a wide range of options to take part in each of the energy transition development stages. Identifying and tailoring community expectations to the extent to which participation form they want to involve can help to enhance the sustainability and viability of the community energy project in rural areas. Further research on understanding the relationship between determining community participation in community energy and the sustainability of the project is necessary to explore. As this study focuses on co-ownership schemes of energy projects, this study can contribute to developing an analysis framework in other ownership models in community energy projects. It signifies to whether the community energy, either in community-led or co-owned project, has complied the aspects of community inclusions.

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