

The implementation of small-scale, community-owned wind energy: a policy analysis in Flanders, Belgium

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Context

Since the liberalization of the EU energy market in 2003, roughly 75% of the Flemish energy sector is owned by large foreign corporations (Vinck, 2007). Compared to other EU-countries, the production of wind energy in community-ownership remains fairly limited at a share of 3.8% (Sansen, 2014). Coupled with a declining local support base for the implementation of wind turbines, the future of a comprehensive energy transition with an inclusion of social and cultural components remains uncertain (VILT, 2012). Researchers stress that a range of pressing sustainability-issues nonetheless require a radical reform rather than a gradual transition within the contours of the current system. They call for a co-evolutionary approach: a successful transition requires a system-wide approach for the creation of sustainable and structural support at the local level (STRN, 2010).

The implementation of wind energy in Flanders is at the crossroads of different policy levels, causing clashes of interest and therefore serving as a striking example of the difficult (social) energy transition in the region. Firstly, issues surrounding the location of wind turbines exceed the local level by the increasing capacities and height of wind turbines. Both the Flemish government and the subordinate regions claim their stake in the debate and policy-making, each with their own approach for realizing the pressing energy transition. Secondly, the benefits of wind energy are primarily situated at the macro-level, in the form of carbon reduction and the achievement of EU objectives, while disadvantages in turn are for the local residents at the municipal level in the form of noise and visual pollution. These contradictions and conflicts highlight the need for a coherent spatial policy at all levels in consultation with the various actors involved.

The current paper presents the key findings of an analysis of the Flemish wind energy policy and its consequences for the implementation of community-owned wind energy. This small-scale form of implementation has earned a considerable amount of attention from the international scientific community and is considered as a valuable option in achieving a sustainable energy transition in environmental, economic and social terms. Against this backdrop, a review of the existing barriers and opportunities for the development of community-owned wind in Flanders is in order.

Method

The paper starts with a literature review, in which the main conceptual methods used in this research field are combined into a hybrid framework useful for the analysis of the spatial policy for wind energy in Flanders. First, an overview of existing definitions and categorizations of community-wind energy are presented, mostly derived from research carried out by Walker (2008), Bolinger (2001) and Jansen (2009). The resulting combination of relevant categories is subsequently used to perform a single case study-analysis for Flanders. For each category, the inherent characteristics are presented regarding spatiality, structure, process and result. Special attention is devoted to the degree of involvement of local residents, as this is considered to be an important driver in delivering sustainable support for the implementation of wind energy.

In a second phase, the possible barriers and opportunities regarding the implementation of community-owned wind energy are identified. A distinction between legal, regulatory, tax, market, technical, cultural and spatial barriers and opportunities are made in order to achieve an extensive overview of existing drivers and policy measures at the international, national and local levels.

This grounded theory approach (Verschuren & Doorewaard, 1999) is then complemented with several in-depth interviews and subsequently crosschecked for validity with desk research of the relevant policy reports. This method results in a clear-cut identification of the current barriers in Flanders influencing the implementation of community-owned wind energy, together with a presentation of possible alternatives derived from different policies abroad.

Results and conclusions

Community-owned structures have proven to reduce existing opposition by local residents against the implementation of wind energy. In Flanders, this local resistance has often led to substantial delays in the planning process. This study produces a systematic overview of the existing structure of the Flemish wind energy market with respect to small-scale community-owned wind energy, and thus provides a clear overview set of the current barriers and possible alternatives.

The conclusions of the study can be summarized as follows:

- Community-owned wind energy in Flanders can be realized through three approaches: the community-led approach, the developer-led approach, and through an investment fund.
- The most advanced approach of community-ownership, the community-led approach, has the highest potential to create local support for wind energy because its structure inherently implements various participation components. The wind energy project is locally initiated by the community, and citizens remain actively involved during its development and management through financial participation.
- An analysis of the existing community-owned wind energy landscape in Flanders shows a dominance of the developer-led approach. In this case a project is generally initiated by a large-scale wind developer, while involving citizens nationwide by providing financial shares. Some developer-led approaches, however, provide additional room for participation. With some minor exceptions, the community-led approach remains non-existent in the Flemish context.
- The dominance of the developer-led approach is the result of some persistent barriers for small-scale wind energy. The main barriers are situated within the market structure and spatial policy of Flanders.
- In today's liberalized market economy, small community projects have some distinct competitive disadvantages compared to commercial developers. Large companies tend to rely on capital reserves and are able to enforce favorable conditions when needing credit. Smaller projects are largely dependent on the earnings generated during the sale of electricity. Thus, the type of support mechanism imposed by the government, and its ability to create security of

investment, plays a major role in the viability of small community projects. The current Green Certificate System however, with more than 20 reforms in the past decade, has had its difficulties in creating a stable energy market (Bollen, 2011).

- Spatial policy can exert both a direct and indirect influence on the implementation of small-scale wind energy. In the past, this was achieved by means of a structured plan, confining the siting of wind turbines to only a few locations according to a precise set of criteria. Since 2009, however, some criteria were dropped in order to increase the development rate, which resulted in a chaotic pursuit for available sites on agricultural land, sold to the highest bidder (VWEA, 2013; Callens, 2013).
- In the current regime, only the developer-led approach is able to compete with large-scale commercial developers, due to its ability to mobilize a higher number of participants on a national scale.

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