



Viewpoint

Undesired reinforcement of harmful ‘self-evident truths’ concerning the implementation of wind power

Maarten Wolsink*

Department of Geography, Planning and International Development Studies, University of Amsterdam, Nieuwe Prinsengracht 130, 1018 VZ, Amsterdam, Netherlands

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ABSTRACT

This ‘viewpoint’ draws attention to a lingering, simplistic and faulty interpretation of the complex phenomenon of acceptance of renewables and their implementation in concrete projects by all relevant actors—namely the ‘backyard theory’. During the last decade, research that investigated NIMBY has provided support to disprove the two prime hypotheses (proximity and decreasing property-value). The current mainstream trend in academic circles is clearly towards abandoning NIMBY explanations.

However, in practice among developers and policymakers NIMBY thinking still prevails. Unfortunately there is also some academic writing that persists in recycling the ‘backyard theory’—despite ample research to the contrary—thus feeding this faulty interpretation of implementation problems. A recent review of the state of the art of wind power implementation is taken as an example; it presents NIMBY as a common-sense, self-evident truth, while to support this explanation it cites publications that actually refute this view and instead support the mainstream move towards abandoning NIMBY thinking. This shift is important, because further academic support for this concept would serve to hinder rapid deployment of wind power and also other renewables.

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1. Introduction: self-evident truths

Analysis and change of institutions is crucial in overcoming deadlocks in the development of new systems, known as ‘institutional lock-in’ in innovation theory (Unruh, 2002; Lehmann et al., 2012). These lock-ins impede innovation because they strengthen non-acceptance among many societal actors involved in numerous decisions that are essential to further deployment of Renewable Energy Systems (RES). An important common practice that should be put in the spotlight may be considered a textbook example of such an ‘institution’ that is currently impeding the advancement of renewable energy deployment in many countries. It is the established trend to label objections to developments as NIMBY, a ‘self-evident truth’, but this reinforces a vicious circle, slowing down RES implementation.

Successful implementation of new technologies requires socio-political acceptance at all levels of society (Wüstenhagen et al., 2007). The implementation of wind power is a form of innovation: not only does it bring new technology but also new ways of organizing the socio-technical system of power supply; both are subject to social acceptance. Such reorganization is required to integrate RES in the power supply, and to take positive decisions

about construction and investment in the new infrastructure needed for wind power. These new ways of organizing require new ways of thinking, which is a crucial part of innovation. Institutions are defined as mutually reinforcing patterns of behavior and thinking of societal actors, as reflected in formal and informal rules, norms and procedures (North, 1990). These patterns of thinking and behavior can be recognized within all realms of society, including governance systems. The way existing supply and demand of electrical power are shaped is also full of such patterns of behavior and thinking. These patterns are based on formal and informal rules that have emerged over time. Looking at implementation of RES it should be recognized that these rules emerged under different conditions, which focused energy sources different than RES. The most essential changes in the ways of thinking concern modes of thought that are historically rooted in the competent organizations. This phenomenon is called ‘path dependency’ and reflects the historical roots of existing institutions (Thelen, 1999). The process by which actions are repeated and given similar meaning by others is called institutionalization, and there are many phenomena in power supply policy that reflect such path dependant institutionalization processes, for example how infrastructure is built and how the supply of electricity is organized. Because these institutions were framed to serve societal needs that did not include the implementation of a resource like wind and within a different socio-economic environment, these patterns do not support

* Corresponding author. Tel./fax: +31 205256229
E-mail address: M.P.Wolsink@uva.nl

innovative thinking today. Rather, they often impede the development and implementation of new views, approaches, techniques and practices required for the implementation of wind power. Institutional path dependency is often responsible for unfavorable conditions that forestall the introduction and positive decision-making regarding new socio-technical systems such as wind power (Jacobsson and Johnson, 2000; Breukers and Wolsink, 2007).

The concept of 'institutions' implies patterns of thinking that are continuously reproducing and reinforcing themselves. Within these patterns of thinking many institutionalized thoughts are in fact often considered 'self-evident truths' that do not need any reconsideration (Ostrom, 2000). One of these so-called self-evident truths concerns the Not-In-My-Backyard (NIMBY) 'theory'. This view on opposition to renewables' schemes seems to provide an attractive excuse for institutionalized actors, to avoid considering and re-examining institutional factors. Unfortunately, this idea also seems to extend to academic researchers, who should actually be very critical towards so-called common sense thinking.

2. The NIMBY language

Social acceptance of RES means acceptance among all relevant actors in society—indeed much broader and conceptually fully distinguished from mere *public* acceptance. Implementation of renewables requires significant institutional changes, and changing institutions is always very hard. These changes are primarily urgent among actors in the existing organizational structure of the energy sector and relevant policy domains. Implementing new forms of energy provision requires changes in several strong institutions, including the rules and practices that are applied in investing and decision-making about energy and infrastructure. Institutionalized technocratic thinking is behind all bottlenecks to accepting RES: the energy sources, the changes in power supply that are associated with their implementation, and the development of RES projects. Moreover, this applies not only to wind power but to all other renewables (Devine-Wright, 2011). In fact, it concerns all of the organizational adaptations of the power supply system that are needed for the required innovation, which in turn can further accelerate the deployment of renewables and advance distributed generation (Wolsink, 2012). Thinking in terms of NIMBY is part of this strong tendency of technocratic thinking, which by the way is nothing new in the energy domain. For decades advocates of nuclear power have been stuck already for 40 years in their technocratic approach to viewing acceptance issues as merely NIMBY (Ramana, 2011). This thinking is also part of the institutional lock-in for the deployment of renewables. Hence, it is time to recognize that the belief in the NIMBY theory is institutional and that it must be abandoned so that RES deployment can flourish.

3. Example: a recent wind power review

To illustrate how the practice of technocratic NIMBY thinking persists, I will use the example of a recent review of wind power developments by Kaldellis and Zafirakis (2011). Unfortunately, this review is only one example of the reinforcement and easy repetition of a common sense view, as in fact it is a widespread practice. A review is a scientific paper that provides a synthesis of research at certain moment in time, in this case about the history of wind power development. Reviews are fulfilling a strong need among scholars to stay up to date about current developments in their respective fields. The objective is to reflect the current state of the art, updating the reader without the necessity to read all

publications with recent new findings and insights, and to suggest options for further reading for more detailed information, background knowledge and discussion. Earlier reviews on wind power have been very valuable (Ackermann and Söder, 2002), but with progressive rapid developments there is a need for new reviews that help us to understand how to facilitate and even accelerate RES development. The use of such general reviews is widespread for scholars and professionals alike, and the fact that it is a peer review publication provides legitimacy to the information and views provided. To create fully legitimate overview, the description of events, trends, research outcomes and current knowledge—or their contestations—should be adequately addressed. Hence, a review is foremost a publication that must not reinforce a 'self-evident truth' by uncritical, repeated common sense viewpoints.

In the few paragraphs that Kaldellis and Zafirakis (2011) set aside for issues of social acceptance, they primarily repeat common sense views, suggesting that the provided information is self-evident. It will be shown that the common sense view they present is invalid knowledge in the first place. Even worse, it has come to the fore as a factor that impedes rapid deployment of wind energy application.

4. Issue 1: 'public' as a proxy for 'social'

In the section 'Environmental performance' Kaldellis and Zafirakis (2011, p. 1898–9) provide a short paragraph on the acceptance of wind power in society:

“... environmental performance of wind energy perceived by the majority of people (over 70% in favor) and transformed into widespread social support (only solar energy seems to be more socially accepted) further boosts wind energy developments”.

This is illustrated with figures taken from the Eurobarometer (2007) survey regarding the popularity of energy generating techniques. Implicitly, this paragraph suggests that public popularity reflects social acceptance. Perhaps such figures may be remotely considered indicators of the general acceptability of the techniques among individual citizens, but presenting public opinion about an abstract idea ('wind power') as a proxy for a very complex phenomenon (such as decisions about actual application and implementation, taken by many different types of actors in a wide variety of conditions) is a fundamental misconception. Social acceptance concerns complex decisions taken by many social actors (Wüstenhagen et al., 2007). For example, one such decision—among many other decisions not connected to public attitudes—is the bank official's credit decision about an investor's plan to set up a wind farm. This decision is related to the bank's policies, the financial procurement system, the grid managers' policies, legal frameworks, tax regimes etc. (Bürer and Wüstenhagen, 2009). Granting such credits is essential for wind power deployment, but there is no theoretical or empirical underpinning for any relation between a bank officer's decision—a building-block of social acceptance—and public attitudes.

Social acceptance concerns decisions, affirmative as well as negative, at all scales and levels: decisions in policy arenas, in markets, in communities, by civil society organizations, by households etc. It also includes decisions about investing in wind farms, actually constructing them, allowing them to be constructed on designated sites, supporting the construction with concrete measures (financial as well as social), application of wind generated power, etc. In short, social acceptance is about all kinds of decisions by a plethora of actors throughout the entire chain of energy production, distribution and consumption, and about the socio-political and economic context in which this chain develops.

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