Renewable Energy 68 (2014) 194–202

Contents lists available at ScienceDirect

Renewable Energy

journal homepage: www.elsevier.com/locate/renene

The role of public participation in identifying stakeholder synergies in wind power project development: The case study of Ontario, Canada

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ARTICLE INFO

Article history:
Received 5 September 2013
Accepted 3 February 2014
Available online 28 February 2014

Keywords:
Public participation
Wind energy
Participatory model
Environmental governance

ABSTRACT

Over the past several decades, the scope of decision-making in the public domain has changed from a focus on unilateral regulatory verdicts to a more comprehensive process that engages all stakeholders. Consequently, there has been a distinct increase in public participation in the environmental decision-making process. While the potential benefits of public engagement are substantial in terms of identifying synergies between public and industry stakeholders that encourage project development, this participation does not come without its challenges. Some of these key challenges include: a lack of technical knowledge in a case of complex technical issues; the process has become more time-consuming than may be necessary; a different perception of risk by citizens and experts; and individual differences in values, beliefs, and motivations, that may prevent the reaching of a joint consensus. To meet global energy demands and fulfill ambitious targets for greenhouse gas reduction, renewable energy has received increased attention as a feasible alternative to non-renewable electrical generation. However, current literature on renewable energy, particularly on wind power energy, highlights potential technological, economic, social, or public barriers to renewable energy investment. This paper provides a case study of the Ontario, Canada wind power generation market, identifies the facilitators and constrainers that affected public input to wind project development in this Province, and finally provides guidance on improving public consultation in the wind project development decision-making process.

1. Introduction

In response to the external pressures of globalization, international social movements, and their own domestic affairs, the nature of government has been changed. Delegation and decentralization of the government's role and responsibilities in providing services and the influence of a growing number of community-based organizations has resulted in increased citizen participation in the regulatory decision-making process (Fig. 1). In other words, there has been a shift in political approach from governing to governance. Over the past several decades, the scope of public decision making has changed from a focus on state officials and experts' verdicts to comprehensively addressing stakeholders' demands and engaging citizens [1]. Consequently, there has been a distinct increase in public participation in environmental decision-making processes. This may be due to public awareness and citizens' demands to have a greater role in decisions that affect their welfare; a recognition of the benefits (e.g. citizen's accountability and responsibility) of involving citizens in decision-making processes by public officials; complying with new regulations which have made it necessary to include public opinion, specifically in risk arenas; improving the quality of decision-making by avoiding unpopular policies; and achieving the key principle of a democratic society to acknowledge the basic human rights regarding democracy and procedural justice [2–4]. According to Bijlsma et al. [[5], p. 397] "If decision-making concerning the use and development of science and technology is to be truly democratic, then the various actors must have equal opportunities to participate in the decision-making process."

While the potential benefits of public engagement are substantial, this participation does not come without its challenges. Some of these key challenges include: a lack of technical knowledge in a case of complex technical issues; more time-consuming process than may be necessary; an incomplete understanding of issues by citizens, potentially resulting in a different interpretation of action consequences; a different perception of risk by citizens and experts and finally; individual differences in values, beliefs, motivations and, conflicts of interest that may prevent the reaching of a

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http://dx.doi.org/10.1016/j.renene.2014.02.004
0960-1481/

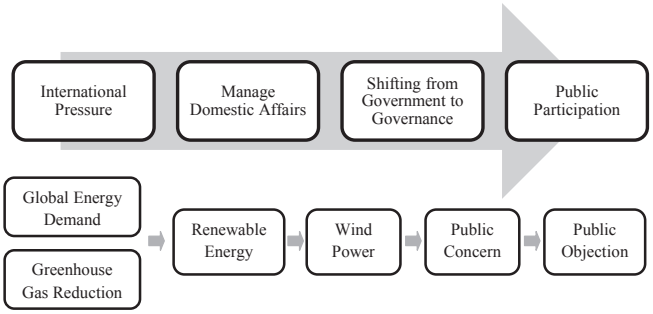

Fig. 1. Drivers for public participation in renewable energy projects.

joint consensus [3,6,7]. These factors can limit the benefit of public participation in making complex policy decisions.

To meet global energy demands and fulfill ambitious targets for greenhouse gas reduction, renewable energy has received increased attention as a feasible alternative to non-renewable electrical generation [8–10]. Current literature on renewable energy, particularly on wind energy, highlights potential technological, economic, social, or public barriers and solutions to renewable energy investment [11]. What distinguishes wind power from the other renewable energy sources is the visibility in the landscape, which remains the key factor in public opposition [12]. In the case of developing a new wind energy project, public officials must balance the needs and views of the local public with the larger jurisdictional targets and interests. As McLaren [[10], p. 2648] states, "members of the local communities often object to proposed wind turbines on the grounds of visual intrusion, noise pollution or local environmental disturbance. In many cases, well-organized local opposition groups form."

Wright [[13], p. 6] referenced Breukers and Wolsink [14] in describing public participation as "a non-specific term that is open to interpretation, however in the context of wind energy, there is precedent to accept the following idealized definition: direct involvement by residents in plan making beyond that of formal consultation, i.e., facilitating citizens with an opportunity to influence the planning process".

For the purposes of this study, public participation will generally be understood as the contribution by groups or individuals (independent of project developers, governmental agencies etc.) to the decision-making process. The public usually have an interest in the outcome of such a decision because they may be affected by the outcome of that decision, either directly or indirectly [15]. Public participation encourages decisions that are in line with citizen preferences, resulting in increased levels of support from the public and less reluctance to the acceptance of the proposal [16]. However, incorporating public view into decision-making process is not a costless approach.

With that in mind, the two main objectives of this paper are: (1) to identify facilitators and constraints that affect public input to a wind project development and; (2) to provide guidance to improve the practice of public consultation in a wind project development decision-making process.

The remainder of this study is structured as follows. First, a review of literature on public responses to wind energy is presented. This provides some context for the next section, which focuses on the advantages and disadvantages associated with public participation in decision-making processes, highlighting a case study from the Province of Ontario, Canada. Next, the role of the authorities to construct a robust collaborative framework with the public is discussed followed by the formulation of a conceptual framework as a structure for future study. Finally, the paper applies this conceptual framework to the Ontario case study with a resulting summary conclusion and recommendations for future study.

2. Public responses to wind energy

Wind power currently provides between 3 and 4 percent of the Province of Ontario, Canada's electricity, but it is the fastest growing energy source and will continue to play an increased role in supplying electricity [17]. Ontario is at the forefront of wind energy in Canada, with a wind power generation capacity exceeding 1500 Megawatts (MW) [18]. There are more than 45 wind farms in Ontario, and a number of additional wind projects are currently being developed [19]. General opinion poll studies have indicated majority support for switching from conventional fossil fuels to wind energy development in Canada [20]. However, the gap between plan and practice seems wide. While many people at a national level have expressed the desire to utilize wind energy, there has been conflict at the local level [13]. Some scholars [20–22] describe this social gap as NIMBYism (Not In My Backyard). The NIMBY perceptions of wind farms have been used as a means of describing the tension between the general support for wind energy and local opposition to specific developments. This opposition is attributed to the self-interest of local residents whose NIMBY sentiments are driven by their determination of the net costs and benefits [23]. These negative attitudes often result from fears relating to the perceived impact on human health, the local environment, and individual property value [12]. However, the NIMBY explanation has been characterized as being overly simplistic and that the empirical research on community has been lacking in specifics related to the influence that social networks, social representations and social identities have on a community's attitude to a wind farm [21].

2.1. Factors influencing project success

Public objections raise questions regarding the factors that affect community acceptance of renewable energy projects. Stakeholders, who feel that they have not been consulted or that their perspectives have not been considered, usually form a strong opposition to renewable energy policy initiatives that could prevent them from being implemented. A proposed solution is an environmental assessment (EA) during the development process that considers the involvement of the community in addressing possible environmental impacts, not only to identify key local environmental knowledge, but also to gain mutual support between the public and the project developers. This method, however, can be expensive and time-consuming [12,24–26].

McLaren [10] compared wind energy planning using eighteen case studies in England, Wales, and Denmark. McLaren articulated several major factors that affect the success of developing wind projects with a higher level of public participation. These include: the involvement of a full range of potential stakeholders; minimizing the involvement barriers (e.g. time and location of public meetings); collaborative decision-making by planners and local community members; financial ownership of the project; initiation of the project by a local group or individual instead of an outsider; the continued involvement of local community even after construction; a strong relationship among actors within a network (this is applicable for both supporters and opponents); excellent communication within the network; charismatic critical actor; and positive media coverage that could be directed by both supporters and opponents. Based on the data analysis results of these case studies McLaren [[10], p. 2658] concluded, "Projects with high levels of participatory planning are more likely to be publicly