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Chains of trust: Energy justice, public engagement, and the first offshore wind farm in the United States

Joseph Dwyer, David Bidwell*

University of Rhode Island, Department of Marine Affairs, 1 Greenhouse Road, Suite 209, Kingston, RI, United States

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ABSTRACT

Public acceptance of renewable energy technologies (RETs) is critical to the broader adoption of these technologies and reducing the role of fossil fuels in electricity generation. Recent investigations into the public engagement processes surrounding RET projects reveal certain procedural deficits, especially concerning procedural fairness and stakeholder trust. With this in mind, we analyze two engagement processes that led to the Block Island Wind Farm, the first operational offshore wind farm in the United States. Through semi-structured interviews we identify certain procedural techniques that allowed process leaders to first build public trust in themselves, then in the process, and ultimately in the outcome. This chain of trust was fostered through informal efforts of process leaders to meet stakeholder expectations concerning process leaders' ability to work for the public interest, provide meaningful engagement opportunities, and to produce non-discriminatory outcomes. This case study highlights the potential of such informal actions to meet stakeholder expectations and build trust, while also empirically demonstrating specific techniques that future process leaders could employ to increase stakeholder acceptance of RETs.

1. Introduction

Reducing societal dependence on fossil fuels requires the broad adoption of renewable energy technologies (RETs). This transition is contingent on the social acceptance of renewable energy, including general socio-political support of RETs and the local acceptance of specific projects [1]. Recent international agreements, such as the Paris Climate Agreement, as well as the prevalence of domestic renewable portfolio standards and obligations (see IRENA et al. [2]) indicate there is a widespread desire to increase the share of electricity coming from RETs at the broad socio-political level. Acceptance and support of renewable energy infrastructure projects at local levels, however, cannot be assumed. Previous work has identified that public opposition to specific projects may be a substantial obstacle to a global energy transition [3–5].

Researchers have sought an explanation for the so-called "social-gap" between widespread general support for renewable energy yet relatively slow uptake of the technology [6,7]. Scholars have speculated that a factor contributing to this gap may be the perceived lack of fairness and quality of decision-making processes and their outcomes for projects at the local level [8,9]. Identifying both the need for wider implementation of RETs and the importance of social acceptance, scholars have advocated public engagement in planning processes as a means of facilitating renewables development [10] and ensuring a socially just energy transition [11]. However, there has been little guidance on the characteristics of a successful engagement process for the planning of renewable technology [12]. The findings presented here seek to highlight specific informal procedural characteristics utilized by process leaders to achieve stakeholder acceptance in a RET planning process. These informal actions can provide new techniques to process leaders who have found that formal actions tend to fall short of achieving acceptance [13].

This article examines the planning processes associated with the Block Island Wind Farm (BIWF), the first commercial offshore wind project to be constructed and operated in the United States. Quantitative studies have revealed substantial support for the project among local community members [14] and visitors to the island [15]. A recent analysis of offshore wind energy projects in the United States credits two factors for the success of the BIWF: community benefits of the project and a planning process that included "bi-directional deliberative learning" [16]. In this article, we explore in more depth the latter of these two factors, by focusing on characteristics of public

Abbreviations: BIWF, Block Island Wind Farm; CRMC, Coastal Resources Management Council; NIMBY, Not in My Backyard; RET, Renewable Energy Technology; Ocean SAMP, Ocean Special Area Management Plan; REZ, Renewable Energy Zone

* Corresponding author.
E-mail address: dbidwell@uri.edu (D. Bidwell).

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engagement in BIWF planning and development. More specifically, we examine how well stakeholders' expectations for the process were met through informal actions of process leaders and how this influenced subsequent feelings of stakeholder acceptance. The findings presented in this study look to highlight specific actions that could be employed by future process leaders to engage stakeholders in a manner that simultaneously develops acceptance of RET projects and trust for the institutions advocating the technology.

Engagement for the BIWF occurred in two major phases. The first was a state-sponsored regional ocean planning process; the second entailed separate planning and permitting processes led by the project developer. The five-turbine project was sited in a Renewable Energy Zone (REZ) located off the coast of Rhode Island, the boundaries of which were delineated via the two-year, state-sponsored regional planning process, known as the Ocean Special Area Management Plan (Ocean SAMP). Final state and federal regulatory approval and construction of the project came at the end of a lengthy design and review process, in which various stakeholders and interest groups participated to some degree. This article describes the perceptions of a sample of the state resource managers, project developers, and public participants involved in those planning processes. In most cases, public participants involved in the processes were representatives of user groups with an interest in the outcome of these processes (i.e. stakeholders).

Based on semi-structured interviews, this article provides an overview of the experiences and insights of nineteen participants engaged in and leaders of these two processes. Our interviews reveal that participants' perceptions of how well their expectations were met concerning process leaders, the process, and the outcome likely affected their opinion of the project. Success (or failure) in meeting participants' expectations for a meaningful engagement process was tied explicitly to the creation of trusting relationships among the developers, process managers (i.e., governmental and academic entities responsible for some engagement activities), and participants. Participant trust in the process leaders, the process, and the outcome were essential to generate acceptance for the outcome. Ultimately, this article identifies procedural techniques, specifically informal ones, that appear to have built a chain of trust in the institutions that led the successful planning and siting of the United States' first offshore wind farm.

2. Background and literature review

The mismatch of broad public support for renewable energy and the slow deployment of RET infrastructure has been termed the "social-gap" [6]. Traditional explanations for the gap, such as NIMBY (not in my backyard) responses and knowledge deficits within the public, have been widely discounted as they fail to fully explain opposition to projects [9,17–19]. Certain aspects of these explanations certainly exist, as some individuals may oppose a project due to concerns over impacts to a place's character [20], personal property and welfare [7] or unfamiliarity with renewable energy technologies. However, scholars note that general support for renewables is often qualified [16], with public acceptance of local development depending, in part, on project characteristics. Relevant characteristics include the perceived trustworthiness of developers, the fairness of planning processes, and the distribution of project benefits and impacts [6,7,21–26].

Recent investigations by researchers into public support for RETs have shifted the debate from a supposed "knowledge deficit" in opponents to a potential "democratic deficit" in the engagement process [6,27,28]. Rather than blaming public opposition to RETs on a lack of knowledge about the technology, recent work stresses that meaningful engagement of stakeholders in the planning process can increase support for projects [10,29]. However, academics have struggled to come to consensus on a definition for meaningful engagement. Studies such as Jenkins et al. [37] have highlighted certain characteristics such as the legitimacy of the process, the discourse during the process, and public impact on decision-making and outputs as critical elements to a just engagement process. For this study, we build upon this and assert that meaningful engagement implies that participants: 1) are a part of a process with no predetermined outcome; 2) have an opportunity to offer input; and 3) that input is valued enough to potentially affect decisions, including the ability to stop projects deemed undesirable. While engagement is not a panacea and does not provide a guarantee of gaining public support [30], engaging the public in a meaningful manner may be a critical component to address this democratic deficit.

2.1. Public engagement

Engagement in this study is considered an umbrella term covering different mechanisms of communication between process leaders and stakeholders involved in the process [31]. Within engagement, information can flow from a process leader (generally a developer or resource manager) to the public, from the public to the process leader, or through a two-way interaction, which Rowe and Frewer [31] define as *participation*. Participation scholars advocate multi-directional dialogue, as it promotes community networking to solve complex issues and creates a more policy-literate public [13]. Further, a report by the U.S. National Research Council [32] concluded that engagement of the public in environmental decision-making can result in higher quality decisions and greater perceived legitimacy of those decisions.

Public engagement processes have become a legal necessity for almost all projects with potential environmental or societal impacts in the United States. Innes and Booher [13] argue that most modern public engagement fails the public because it defaults only to the legal necessity as justification for engagement, thus falling short of providing meaningful engagement. They go on to explain that current methods, such as town hall meetings, public hearings and comment periods, offer little opportunity for authentic discourse on issues and promote an unproductive one-way flow of information. Moreover, such modes of engagement can breed a sense of unfairness in the process if the engagement occurs after decisions are made, leading to public distrust of the outcome [33]. Flannery et al. [33] further credit these formal venues as reasons why some stakeholders opt to exclude themselves from processes altogether. With a growing recognition that traditional engagement methods are inadequate, scholars and practitioners have called to improve the techniques in which public opinions and concerns are brought into this discourse [34,31], such as collaborative participation and decision-making [13]. Doing so, aims to increase the perceived fairness of these procedures and to produce more favorable and trustworthy outcomes [35,36].

2.2. Fairness and trust to generate acceptance

Fairness is a major theme within an emerging social science known as energy justice. Energy justice provides a framework for evaluating aspects of procedural and distributive justice surrounding energy production systems and projects [37]. Procedural justice, as the name suggests, assesses the process through which decisions are being made and how different stakeholder interests are engaged in decision making [38]. Aspects of a fair process include access to pertinent information, inclusion of local knowledge in decision making, ability to participate meaningfully in the decision-making process, use of impartial decision-makers, and opportunity for stakeholders to properly challenge or reject official decisions [37]. Distributive justice is then concerned with the outputs of a process and the assurance that the costs and benefits of such outputs are distributed evenly among those affected in an impartially and morally objective manner [38].

Work by Firestone and colleagues has investigated how perceptions of procedural fairness (i.e. justice) affects public acceptance of wind energy projects on land and offshore [39,40]. These studies reveal that there is a relationship between perceptions of fairness and acceptance of proposed and constructed projects; however, a direct link between attempting to provide procedural fairness and stakeholder acceptance is