

**Community Mobilization in Support and Opposition of
Wind Energy Development:
Evidence from Wasco and Sherman Counties, Oregon**

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Abstract

Despite widespread public support for renewable energy development, the siting of wind energy facilities can prove problematic due to opposition from surrounding communities. I propose a unifying framework to explain community response to wind energy development – showing how concepts from environmental sociology related to local biophysical and socioeconomic conditions shape the factors highlighted by social movement scholars as important for mobilization – perceptions of threat, political opportunity, and resources. I provide empirical evidence for the applicability of this framework via a comparative-case study of wind energy development in two neighboring Oregon counties along the Columbia River Gorge, Wasco and Sherman. Using relevant socioeconomic data, newspaper articles, and interviews with active stakeholders in each location, I show why and how the residents in sparsely-populated, wheat-growing Sherman County, facing dwindling economic prospects, came to view wind energy as a potential solution – another crop to be harvested – and banded together to successfully support such development. In contrast, particularly for one proposal along the Gorge, newer residents in Wasco County, many of whom had moved there to enjoy the beauty and natural amenities provided by its unique location, joined together with support from key allies to successfully oppose such development. My findings highlight the importance of contextual conditions in shaping community response to wind energy development proposals and suggest thoughtful consideration of these factors in the development and siting of such proposals.

Introduction

One possible way to mitigate the main cause of climate change, carbon dioxide emissions, is to develop sources of green energy. According to Szarka (2006), the renewables sector enjoys a privileged status in the ‘energy-environment nexus’ because it addresses core social dilemmas: growing energy demand, concerns about energy security and worries about environmental

externalities (greenhouse gas emissions). According to the U.S. Department of Energy (Brodrick et al. 2014), wind power is the largest non-hydro renewable source of energy. The most recent report of the U.S. Department of Energy's Wind and Water Power Technologies Office (Wiser et al. 2015) estimates that wind energy production will increase to at least 10% of the United States end-use demand by 2020, 20% by 2030, and 35% by 2050. Governments encourage wind energy development through various policy instruments. One of the instruments is the adoption of Renewable Energy Portfolio Standards that set targets for a certain amount of energy that should be generated from renewable sources by certain dates (Ottinger, Hargrave, Hopson, 2014).

Furthermore, wind energy enjoys broad public support: 75-80% of the public, according to surveys in the US and UK (Bidwell 2013; Bell et al. 2005). However, despite broad public support for renewable energy as a concept, concrete proposals for large-scale renewable energy facilities sometimes meet local resistance (Bidwell 2016). That is why, there is a 'gap' in public attitudes toward wind energy: people have positive attitudes toward wind power in general, as expressed in opinion surveys, but sometimes oppose a particular wind power development (Bell et al. 2005). Scholars have substantially examined this 'gap' in public attitudes by using US, European, Canadian, and New Zealand empirical data (Bell et al., 2005; Bidwell, 2013; Batel and Devine-Wright, 2014; Loring, 2007; Graham et al., 2009; Ottinger et al., 2014; Wüstenhagen et al., 2007; Kasperson and Ram, 2013). Yet, there has been little focus on factors that drive community mobilization efforts in support or opposition of proposed wind energy projects. Thus, this study aims to contribute to existing research on wind energy siting by explaining why and how communities mobilize their efforts. In addition, the discussion section outlines planning recommendations designed to achieve a successful outcome that all parties can agree to. The outcome can range from mitigating the adverse impacts of some projects to not siting other projects at all.

Social science studies on community attitudes to wind energy development and explanations for community mobilization

Community attitudes to wind energy development

Scholars seek to reveal factors that influence negative or positive community attitudes toward proposed wind energy projects. First and foremost, Devine-Wright (2005) argues that the ‘not in my backyard’ (NIMBY) phenomenon has typically been used to explain local opposition to the siting of wind farms. Nonetheless, “the NIMBY explanation is both very popular and very widely criticized” (Bell et al., 2005, 465). Actors’ attitudes and decisions are influenced by different ‘contextual’ factors such as culture, values and beliefs, local context. Therefore, scholars try to build “a more nuanced understanding of public attitudes and motivations regarding the development of wind energy and other renewables (Bidwell, 2013, 190). Devine-Wright (2005) underlines the complex, multidimensional nature of factors that shape public perceptions, including physical, contextual, political, socio-economic, social, local and personal aspects. Krause *et al.* (2016) argue that people’s actual experience with wind turbines may contribute to greater community acceptance. Specifically, people’s past exposure to wind turbines moderates the effect of a general decrease in expressed support for a more proximate hypothetical wind energy facility rather than for a facility elsewhere.

There is no unifying model for understanding factors that influence public attitudes toward development of wind energy. Scholars have applied various theoretical frameworks and methodologies to test different hypothesis to explain community acceptance of wind energy projects. Overall, the existing research might be structured around three factors that influence public attitudes toward wind energy developments: procedural justice (fairness and transparency in the decision making process), distributional justice (allocation of costs and benefits of proposed wind energy projects), and the specific community context in which the siting takes place.

In terms of *procedural justice*, the siting process can be defined as open and participatory or closed and non-inclusive. The community trust in developers and in local and state institutions affects procedural justice as well. Whether decisions are made in an unbiased manner and whether stakeholders are treated fairly affects attitudes towards the development process (Bidwell, 2013). Fast and Mabee (2015) comparatively examined the siting of five wind energy projects in Ontario, Canada. They argue that a project's approval by a central authority has been the least productive among different policy strategies. A growing body of literature (e.g., Ottinger et al. 2014, Eltham et al. 2008, Loring 2007) suggests that collaborative and participatory siting processes from the earliest stage of the project (even before a site is chosen), improves siting outcomes for all stakeholders.

Considering *distributional justice*, I distinguish the positive and negative effects of wind energy developments that communities might face. A creation of new local jobs and an increase in tax revenue might be considered as a positive local impact, whereas low-carbon energy production has global benefits for mitigating climate change. At the same time, negative effects might take place as well. These effects include local infrastructure damage, disturbance during turbine operation, visual and noise pollution, wildlife concerns, public health and safety issues, decreasing property values, and increasing electricity prices (Devine-Wright, 2005; Jones and Eiser, 2010; Fischlein et al., 2010; Groth and Vogt, 2014).

Moreover, each wind energy siting case follows a unique path based on the *community's context*. This context depends upon various factors such as the community's past experience with energy facilities siting, a community's values and identity. Devine-Wright (2005) argues that place attachment greatly influences attitudes toward wind energy projects. Batel and Devine-Wright (2014) utilize the theory of Social Representations that considers renewable energy production as a process of social change. The authors accentuate the importance of socio-physiological aspects involved in people's responses to social change. Jegen and Audet (2011), utilizing the Advocacy Coalition Framework, conclude that differences in people's belief

systems explain wind energy acceptance rather than siting procedures or NIMBY phenomenon. Jolivet and Heiskanen (2010) employ actor-network theory to examine the interactions between the technological and social components of wind energy development. To sum up, studies on community attitudes and responses toward wind energy development provide important ideas for shedding light on community acceptance for wind energy acceptance but fail to offer an overarching framework of analysis.

Explanations for community mobilization

As demonstrated above, a plethora of research regarding wind energy facilities siting examines factors that influence people's perceptions and attitudes. However, few studies have considered factors that promote or hinder not just people's attitudes, but also communities' actions either to support or oppose wind energy projects (e.g., McAdam and Boudet, 2012). Specifically, some communities employ various techniques to actively demonstrate their positions, while others remain passive. Community mobilization has been examined more thoroughly in the context of other large industrial facilities such as liquefied natural gas facilities, using theories from the studies of social movements (Boudet and Ortolano 2010) and identifying many similar factors. Furthermore, McAdam and Boudet (2012) distinguish several causal conditions for community mobilization: risk (threats that come with the siting of an industrial facility) around which community can mobilize; political opportunity (upcoming elections might bring more political leverage to opponents); community resources that are represented by civic capacity (the number of nonprofits, voter turnout, the percentage of community members with a college education) and previous oppositional experience operationalized with attributes of existence, recency, and similarity of such an experience; and community specifics (unemployment rate and median income level reflecting community's need for jobs and general investment as well as presence of a similar industry, emphasizing that successfully operated one increases the level of comfort and acceptance of the potential risks, comparing them with immediate benefits of jobs and economic gain).

Boudet (2016) specifies three factors – threat, political opportunity and resources – to explain the emergence of communities’ opposition to liquefied natural gas terminals. The author underlines the importance of combination, not the magnitude of these factors in determining mobilization outcomes. I apply these factors for analyzing empirical data to get insights for better understanding what factors and conditions might explain communities’ mobilization to either support or oppose wind energy developments. Thus, the concepts from social movement theory provide a unifying framework with which to understand community actions to, as opposed to people’s perceptions of, wind energy siting proposals.

Threat

Boudet (2016) identifies threat as risks that an industrial facility can cause, which leads to community mobilization. Following the author’s conceptualization, I define threat as a community’s perceived risk of being adversely impacted by a proposed wind energy development (opponents’ threat) or suffering from a lack of such development (supporters’ threat). An example of opponents’ threat is a community’s risk of being impacted by adverse visual or auditory impacts; an example of supporters’ threat is a risk of not having an opportunity to get additional tax revenue or to lease the owned land, which is potentially available with wind energy development.

Political Opportunity

Social movement studies distinguish the formal institutional structure from more informal structure of power relations (McAdam 1996) as a precursor of mobilization efforts. They also specify the dimensions of political opportunities: “1) the relative openness or closure of the institutionalized political system; 2) the stability or instability of a broad set of elite alignments; 3) the presence or absence of elite allies; 4) the state’s capacity and propensity for repression” (McAdam 1996, p. 27). In current research, I focus on the openness or closure of the institutionalized political system and the presence or absence of elite allies. Boudet (2016) argues

that “movements emerge when political elites become more receptive or vulnerable to movement demands.” The author points out that one of the drivers for such receptivity is the openness of the institutional decision making process.

Resources

Carmin (2003, 45) summarizes that “four types of resources are frequently associated with local action and responses to community threats: organizations, funding, information and experience. Boudet (2016) points out the importance of organizational capacity, communities’ past experience in mobilizing efforts, higher than the average income and educational level as well as lower than average age in mobilization efforts. The author also distinguishes community internal resources and resources of outside actors.

Intercepts between concepts of the studies on community attitudes and responses toward wind energy development and community mobilization

Themes introduced by studies on wind energy perceptions of host communities help clarify concepts of social mobilization literature applied to wind energy context, and vice versa. For example, wind energy siting studies that consider distributive justice shed a light on the concept of threat in the social movement literature applied to the wind energy context. Likewise, wind energy siting studies that consider procedural justice provide insights for the concept of political opportunity in the social movement literature. Studies on mobilization provide researchers with concepts that help understand not only communities’ attitudes but also communities’ actions, which has been largely ignored in the wind energy siting studies. Specifically, communities’ resources are an important variable for such an analysis.

In addition, specific community context influences communities’ attitudes and actions toward wind energy development. Freudenburg and Gramling (1993) integrated biophysical environmental variables into sociological analyses by defining socioenvironmental factors that help explain attitudes toward offshore oil development among different regions. The authors argue that historical factors, biophysical and technological variables as well as social and

economic conditions explain why oil development has been welcomed with open arms in coastal Louisiana and has generated very negative attitudes in northern California. Similarly, in current research I illustrate how biophysical variables as well as social and economic conditions have brought about differences in explanatory factors (threat, political opportunity, and resources) between Sherman and Wasco counties. The symbiosis of these streams of literature will contribute to the knowledge of wind energy siting by explaining communities' mobilization in support or opposition of wind energy development.

Research methods

This research is a part of the 3-year Oregon State University Policy Analysis Laboratory project "Renewable Energy Siting in the West." The project examines factors that increase or prevent community opposition toward proposed projects in California, Washington, Oregon, and Idaho. Specifically in this research, I analyze the development of wind energy projects in two neighboring Oregon counties: Sherman and Wasco. My strategy is to compare and contrast two cases in the Columbia River Gorge with similar contextual settings (in terms of wind capacity, distance to transmission lines and other infrastructure) but very different outcomes in terms of mobilization and development.

In terms of data collection, I follow research design and employ methodological tools developed by McAdam and Boudet (2012) to examine community response to the siting of environmentally risky energy projects, including LNG terminals, nuclear-related projects, a hydroelectric project, a wind farm, and a cogeneration project. In particular, three phases of data collection and analysis can be distinguished. First, I examine secondary data of Sherman and Wasco counties' social, economic, and political parameters as well as testimonies and policy planning and other regulatory documents of wind energy development. This allows conducting an initial overall comparison of these two counties. The second phase is a systematic cataloguing of all local newspaper articles, editorials, and letters-to-the-editors that mention wind energy siting in Sherman and/or Wasco counties. The articles are dated from February 2005 to

December 2013. Within this phase, the first step was a coding of the media coverage by highlighting main actors and organizations involved in the siting process as well as the frequency of their mentioning and their stance toward proposed projects (for, against, or neutral). Furthermore, all editorials and letter-to-the-editors regarding wind projects are catalogued, noting the author's stance. In addition, events regarding decision-making process of the wind energy siting (public hearings, court actions, etc.) were listed in a chronological order noting the number of people participating. This allows developing detailed analytic narratives of the wind energy siting in the chosen sites as well as to identify key participants for interviews.

The next phase was making field observations as well as conducting semi-structured interviews with the key informants identified in the previous data collection phases. I interviewed a diverse set of stakeholders (13 individuals): county- and state-level officials centrally involved in the decision-making process, a developer representative, opposition figures, local proponents of wind energy projects, academic and environmental NGO stakeholders, and a reporter who covered the case. Physical proximity of Wasco and Sherman counties resulted in the interviewees' high level of familiarity with both cases, which was beneficial for the opportunity to make a comparison between cases.

Data analysis started with transcribing the audio recorded interviews and continued with interviews' thematically coding. First, I extracted appropriate primary codes from the existing literature. Second, I added secondary codes that emerge from my data and specify the primary codes. This will assure that data triangulation is carried out to obtain valid results. The analysis of other secondary data will be conducted in order to reveal communities contextual factors, socio-economic and political parameters that might influence the siting process. Specifically, I utilized the following codes:

Code	Definition	Description
Threat	Perceived risks of bringing danger to a group of actors if they do not mobilize	<u>Opponents Threat</u> Safety (ice throws, fire, oil pollution, mechanical failure, blade throw) Aesthetics (view shed, turbine appearance) Wildlife concerns Cultural, place attachment Nuisance (noise, shadow flicker, lights) Damage to local infrastructure Economic (tax credits, subsidies, impact on property values, impact on local tourism) Ideological (anti-climate change) <u>Supporters Threat</u> Loss of economic opportunity (jobs, tax revenue, land leases) Loss of environmental opportunity National security (foreign energy dependence)
Political opportunity	A formal and informal structure of the decision making process that enables or prevents actors to mobilize	Role of public hearings and public comments Election campaign funding Role of technical advisory committees, expertise Community engagement efforts by developers Revolving door (legislators/regulators interactions) State and county legal policies and procedures Trust in developers and government officials
Resources	Material and non-material assets available in the community that enhance mobilization	Social capital (political participation, social engagement, level of education, affluence) Previous mobilization experience Financial capacity Organizational capacity
Community context	Specific local characteristics that can affect the mobilization outcomes	Major economic drivers/community wealth Previous energy development Policy history (land use, urban growth boundaries), Community values and identity Biophysical characteristics
Outcomes	Evidence of mobilization	Community active support or opposition toward wind energy development

Case summaries

Wasco and Sherman counties are adjacent counties in north central Oregon along the Washington state border. Their location in the Columbia River Gorge has led to significant hydropower generation: John Day Dam in Sherman County with 2,160 MW capacity and Dalles Dam in Wasco County with 1,780 MW capacity (BPA, U. USACE 2001). High voltage transmission lines connect the power generated by these dams with load centers in the Northwest and beyond (BPA, U. USACE 2001). Given that the lack of available transmission infrastructure can become a significant hurdle for wind energy development (Fischlein *et al.* 2013), the presence of such infrastructure makes the area attractive to large-scale wind energy developers (Interviews 1, 2, 3, 5, 6, 7, 9, 10). In addition, as indicated by National Renewable Energy Laboratory maps (see Figure 1), most of Sherman County and some of Wasco County possess high-quality wind resource (Schwartz *et al.* 2011). However, despite their immediate geographical proximity, Wasco and Sherman counties significantly differ from each other in terms of topography, climate, soil, natural vegetation, wildlife habitat, and socio-economic characteristics. As I demonstrate later, these specific characteristics influenced the process of wind energy development. Table 1 gives a statistical snapshot of Wasco and Sherman Counties in 2000 – before the major wind energy proposals.

Table 1. Socio-economic characteristics of Wasco and Sherman Counties, 2000

	Wasco	Sherman	Oregon
Population (total)	23,791	1,934	3,421,399
Population Density (people/sq. mi)	10	2.3	35.6
Median Household Income	\$35,959	\$35,142	\$40,916
Population over 60 years old	21.3	23.3	16.6
Unemployment Rate	7.8%	8.5%	5.0%
Population in Poverty	12.94%	14.57%	11.61%
Median Home Value	\$105,500	\$77,400	\$152,100

US Census 2000, BLS Local Area Unemployment Statistics Map

Wind energy development has had opposite mobilization and siting outcomes in these two counties. Community mobilization in support of wind energy development has appeared in Sherman County, while Wasco County experienced community mobilization against it. Overall, Sherman County has eight on-line wind energy farms that generate over 1000 MW. Wasco County has not any commissioned wind farms to date with one approved project and two applications withdrawn by developers (see Table 2). Communities responded in active and organized way to wind energy developments (in one case with strong opposition, in another – with strong support). Figure 1 illustrates wind potential, transmission lines, wind turbines in operation and proposed projects (figures with the black dashed circuit – sites where developers withdrew applications, figures with the solid black circuit – sites with approved but not built projects).

Figure 1. Case study locations

Wind Potential and Turbines in Wasco and Sherman Counties

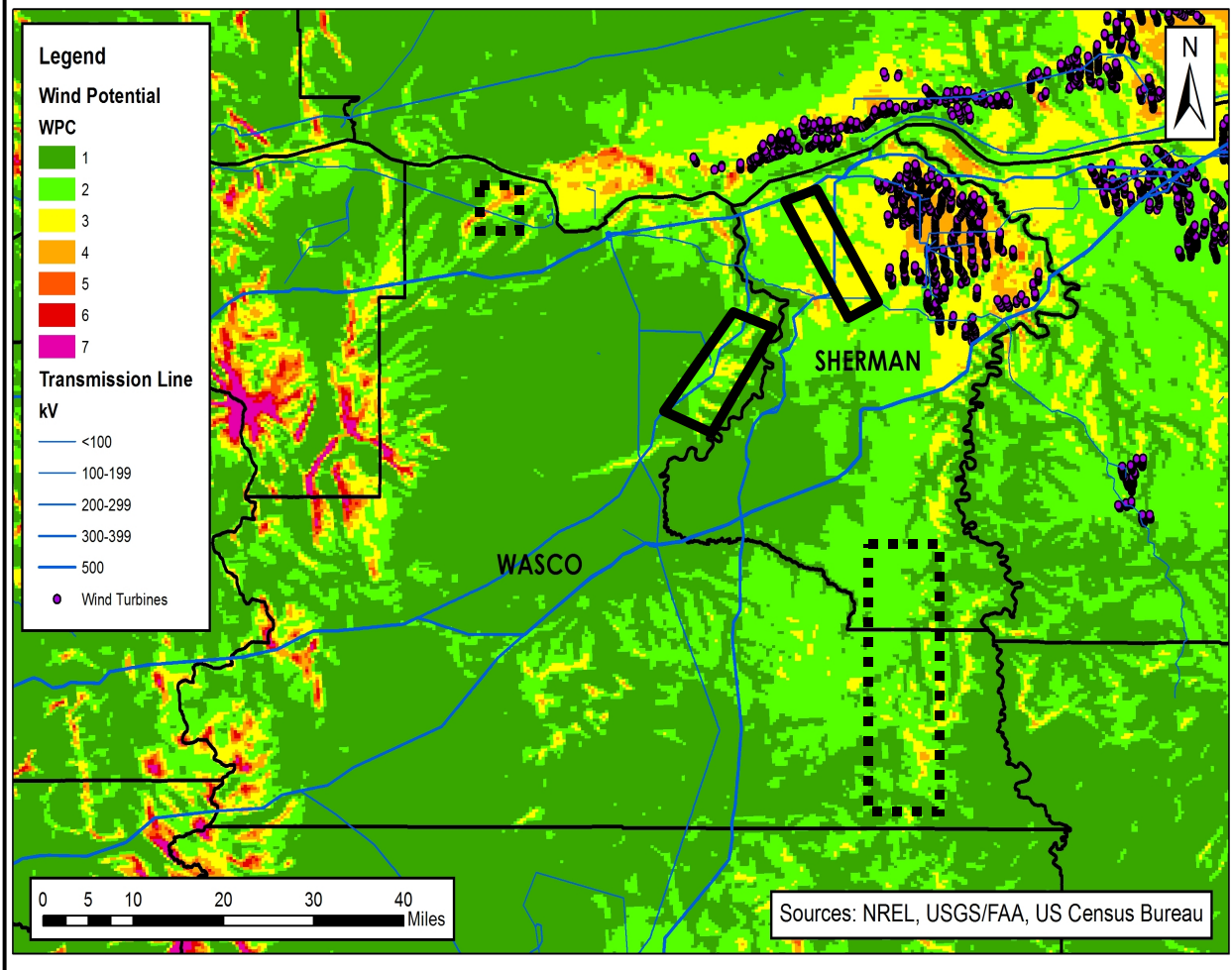


Table 2. List of proposed wind energy projects and mobilization efforts

Wasco County					
Project Name, Developer	Turbines	MW	Outcome Year	Status	Opponents Mobilization
1. Cascade Wind Farm (UPC Wind/First Wind)	40	60	2009	Application withdrawn	High
2. Brush Canyon (E. ON Climate and Renewables)	223	535	2015	Application withdrawn	Medium
3. Summit Ridge (Lotus Works)	87	200	2011	Approved, but not built	Low
Sherman County					
Project Name, Developer	Turbines	MW	Outcome Year	Status	Supporters Mobilization
1. Klondike I, II, III, IIIa (Iberdola)	242	399.1	2001, 2005, 2007, 2008	On-line	High
2. Hay Canyon, Iberdola)	48	100.8	2009	On-line	High
3. Biglow Canyon (Orion)	217	449.7	2007, 2009, 2010	On-line	High
4. Star point (Iberdola)	47	98.7	2010	On-line	High
5. PaTu (PaTu Wind Farm)	6	9	2010	On-line	High
6. Golden Hills (Orion)	267	400	2010	Approved, but not built	High

Sherman County wind development

The first wind energy project in Sherman County, a wind farm consisting of 16 GE Energy 1.5 S-1.5 MW turbines and generating 24 MW, went online in 2001. The company, Iberdola Renewables, supplied electricity to the Bonneville Power Administration. The California electricity crisis of 2000 - 2001 caused a skyrocketing increase in electricity prices. Brett Wilcox, the owner of the Goldendale aluminum plant in a neighboring Washington county, decided to close the plant as he saw it as a better economic opportunity in the situation of very high electricity prices. The Bonneville Power Administration paid Brett Wilcox a shopping credit, which was a difference between the after-crisis electricity price and the price in the original contract, which had been set prior to the energy crisis.

At the same time, an entrepreneur Bruce Morley, originally from Jackson Hole, WY, came to Sherman County and called a town hall meeting in Wasco, a city in Sherman County, which gathered at least 50 landowners. He had a slide show of a wind energy project in Wyoming demonstrating turbines with cows underneath them. People saw potential benefits from such an enterprise on their lands and showed their interest saying "Geez, let's get it to work out here" (Interview 6). At the same time, Brett Wilcox and Bruce Morley went to Europe to visit turbine manufactures to see how wind farms were built there. After they came back, Brett Wilcox, who had resources to invest, secured land for the project (Interview 6). Perceived as a beginning of major wind development, construction of the multimillion-dollar Klondike project meant a lot for Sherman County (Interview 6). Wind development in Sherman County grew rapidly over the next ten years with eight on-line projects totaling 1000 MW of contracted wind power. Overall, the Sherman County community actively supported and welcomed wind energy development (Interviews 4, 5, 6, 8, 9, 10). In 2006, Sherman County Judge Gary Thompson noted: "When the

first 16 turbines went up here, everybody thought it was a flash in the pan. Now every farmer wants one on their place.” Residents mobilized themselves in searching for wind developers and securing land for wind projects, which illustrates the bottom-up nature of wind energy development in Sherman County because it was largely led by the actions of local residents.

Wasco County wind development

The first wind project in the county was proposed by Zond Systems in the early 1990s on Seven Mile Hill, between The Dalles and Mosier in Northern Wasco County. However, the developer withdrew the proposal (Interviews 1, 2). In 2007, UPC Wind, which later became First Wind, proposed a 60 MW project at the same location. That site has an excellent wind resource (Interviews 1, 2, 3, 5, 7, 9, 10) and contains the Bonneville Power Administration’s 115 kilovolt transmission line that runs from The Dalles to Hood River, which provides excellent access to the power grid (The Dalles Chronicle March 13 2007). This proposal generated strong opposition from the local residents. David Ripma, the Oregon Energy Facilities Siting Council Chair, defined the response to the project as the "most contentious" he had ever seen (The Dalles Chronicle July 27 2007). Adam Bless, an EFSC staff, mentioned that this project received after the notice of intent about 100 comments (with just three of them positive), while usually a proposal gets a handful of comments. He made an example of the Golden Hills project in Sherman County, which received only a few comments and all of them were positive” (The Dalles Chronicle June 12 2007). Eventually, the developer decided to withdraw the application in 2009.

The two other wind energy proposals were located in Southern Wasco County. In 2009, Lotus Group proposed a 200 MW project in an area that was sparsely populated and consisted of large land ownership patterns. This project, which did not have significant opposition, received a permit from the Oregon Energy Facility Siting Council. However, the project has not yet been

built because of economic complications. One possible explanation for that is the dwindling of Oregon market for electricity generated by renewables partially because California's restriction of counting electricity generated outside of the state toward compliance with its Renewable Portfolio Standard (Interview 9). Another potential reason is the suspension of the federal renewable energy production tax credits and the ambiguity that developers face because of that. E. ON Climate & Renewables in the southeastern part of the county proposed another wind project in 2011. That project received some local opposition, however not as strong as the Seven Mile Hill project. Residents objected to disturbance of their remote communities by a significant increase in traffic during construction phase, visual pollution from the wind turbines, noise, increasing pressure on local fire protection services, bat kill, and adverse effect for the tourism in the area (Video of public hearings). The developer withdrew the application in 2015. As noted above, the uncertainty with the production tax credits and the dwindling of Oregon electricity market may have prompted the decision (Interviews 2, 9).

Analysis

In order to understand why and how communities mobilized their efforts either to support or oppose wind energy development I utilize three aforementioned explanatory variables – threat, political opportunity, and resources. Analysis has demonstrated that the higher level of perceived threat in both cases contributed to communities' mobilization efforts of both support and opposition toward potential wind energy projects. Data analysis has revealed ample evidence of the significant influence of the institutional structure and the formation of elite allies as well as importance of internal resources in community mobilization efforts in Wasco and Sherman counties. Table 3 summarizes specifics of each variable and specifics of mobilization efforts in both counties.

Table 3. Summary of explanatory variables and communities' mobilization efforts

	Wasco County	Sherman County
Mobilization efforts	High efficacy of local opposition within the institutional decision making structure occurred in regards to the Cascade Wind project. Some people in the county saw wind energy development as an economic opportunity but they didn't organize their efforts in support	Local land owners organized their efforts to seek out wind developers. Few people showed discontent of being negatively affected by wind turbines and they didn't organize their efforts in opposition
Threat	High level of threat for not mobilizing against the Cascade Wind project due to perceived risks: adverse impacts on adjacent residents (view pollution, noise, decreasing property values, health risks), negative impacts on local wildlife habitat and disturbance of the National Scenic Area	High level of threat for not mobilizing in support of wind energy development, which was perceived as a solution to revive wheat farming in the county and to diversify county's economy
Political opportunity	High level of political opportunity through institutional decision making process, which was inclusive and gave ample opportunities for people to raise their voices both in support and opposition	
	Formation of elite allies among opponents and officials due to the controversy of the Cascade Wind project	Formation of elite allies among active supporters, officials and the county's majority to reach a common goal of bringing money to the county Low informal political opportunity for people to raise their concerns against wind energy development because the county's majority was highly supportive of wind energy development
Resources	Highly educated, affluent professionals most of whom recently moved to the area near a proposed site of the Cascade Wind project. These residents used their knowledge of legal procedures and educated themselves on technical issues to effectively comment on a developer's application. Opponents created an organization Families for Seven Mile Hill to coordinate their efforts	A group of land owners created and organization Praise the Wind, Inc to coordinate their efforts in making legal and technical arrangements to secure land for wind energy development

Openness or closure of the institutionalized decision-making process

Wasco and Sherman counties have followed similar institutional decision-making structures for the wind energy siting. Below I summarize the procedures of its process because they are important for understanding public participation in the wind siting process. The Oregon Energy Facility Siting Council (EFSC) regulates the siting of wind energy projects with more than 105 MW nameplate capacity. To obtain a site certificate, a wind energy facility undergoes a review process to determine whether a facility meets the council's siting standards. Council staff members, who are Oregon Department of Energy employees, conduct research and analysis on issues relevant to compliance standards. Staff employ both specific standards of the Council, as well as standards of other state- and county-level permitting bodies. That makes the Oregon siting process a "one-stop" process (EFSC web site). In addition to adopting general standards in its review process, the Council must also incorporate local ordinances that are applicable only to a particular location (Interview 9). The Council solicits public input through public hearings and public comments. Staff subsequently make recommendations to the Council, which consists of seven volunteer members appointed by the Governor and approved by the Oregon Senate (EFSC web site). The Council votes on whether to issue a certificate based on a staff review of whether an applicant complied with the standards. Thus, the Oregon siting process is not politically driven: "If you meet the standards, you get your approval, it's like taking a math test.... the project may be politically popular, it may be politically unpopular, but we are not in the business of reflecting politics" (Interview 7). Wind energy projects with less than 105 MW nameplate capacity undergo a county review process. Both county- and state-level site approval processes are standard-based processes and function in a similar way: If an applicant can show that a

project meets the standards, the project will be approved. In Oregon there are no political differences between county and state processes (Interview 9).

Developers file the notice of intent to inform the Council about their objective to build a wind energy project. A Council project officer introduces a prospective wind project to the public and explains the EFSC review process. The officer also explains how the public can participate in this process (Interviews 7, 9). While the Oregon Department of Energy determines applicable standards for a particular facility, interested parties are given a number of opportunities to express their concerns. If someone makes a comment, the EFSC staff evaluates it and makes sure that applicable standards are employed to address that issue. Developers justify meeting the standards by citing studies conducted by their own experts. EFSC staff, in turn, use their internal or external experts to independently verify the developers' reasoning on a particular issue. Before the Council makes its final vote, members of the public have the right to raise a specific issue to generate a contested case proceeding. This process takes the form of a trial, where parties submit their evidence and have a right to both rebut the evidence of the opponents and to cross-examine them (Interview 7). To sum it up, Sherman and Wasco counties have similar institutional decision-making structures that provide ample opportunities for citizens to voice their voices.

Applying concepts of threat, political opportunity, and resources to explain community mobilization in support of wind energy in Sherman County

County Context

Sherman County consists largely of wheat farms. Most of its residents are from families who have been living there for generations (Interview 4). Since the county's main industry and source of income has been wheat farming, the volatility of wheat prices brings many challenges to the county's economic stability. In the late 1990s and early 2000s, wheat prices were at record

lows. In 1995-1996, the price was \$4.55 a bushel; in 1999-2000, it was \$2.58 a bushel (Vocke et al. 2005). At the same time, the county was experiencing a drought (Interview 6). Sharp reductions in the price of wheat and declining wheat yields due to the drought undercut the area's primary source of income (Interview 4). Therefore, the county's population has been steadily decreasing over time due to scant opportunities to obtain stable incomes. In 1980, Sherman County's population stood at 2172 people (Forstall 1994); in 2000, it had declined to 1934 (Census 2000). Moreover, the decreasing student populations led Sherman County's two school districts to combine into one. This became a big issue in Sherman County because no one wanted to lose their neighborhood school (Interviews 4, 6). As illustrated above, by early 2000s, Sherman County needed to diversify its economy to pay for services (schools, roads, *etc.*) and to help its agriculture sector survive when it was struggling with depressed prices and droughts.

Threat

Landowners and county residents thought that wind energy offered an ideal opportunity to promote income diversification in Sherman County (Interviews 4, 6, 8). First, the county is situated in an area possessing abundant wind resources. In addition, the area's flat, treeless farms, which dominate the landscape, are marked by relatively low vegetation and poor wildlife habitat (Interview 9; Yin 2013). The absence of wild life reduces potential adverse environmental impacts of wind farms. Second, wind energy and wheat farming are compatible and therefore can be easily combined with each other in an effective way. Wind turbines require small amounts of land and at the same time provide a steady cash flow to landowners. Additionally, the county's sparse population (its population density is just 2.3 people per square mile compared to 35.6 people per square mile in Oregon) and large land ownership patterns

make wind energy development viable because fewer people would be impacted by wind turbines (Interviews 1, 6, 8).

In Sherman County, the threat of not having wind energy developments as a source of income diversification was high among different stakeholder groups: county officials, landowners, local businesses and residents in general. County officials were highly interested in wind energy development in terms of increasing county's tax base:

The reason for their support of the development – there was a lot of things, I think they could envision some great tax revenues: each one of those turbines produces more tax dollars than they do in rent to the landowner. An individual turbine out there will pay somewhere of 15 thousand dollars a year in taxes and they probably will pay 5 or 10 to the landowner for rent for place to park their turbine. So the tax revenue is really significant. So it's if you run a county and your revenue is deficient, you wish you had more money to fix roads or you wish you had more money to buy a new police car or you wish you had more money to put a new fire station or any of those things. And someone comes along and wants to put multimillion dollar investment in your community and start paying taxes you're gonna go, "This looks good, as long as it isn't detrimental to the community" (Interview 6).

Land owners were a main stakeholder group who noticeably benefited from wind energy development. They thought that wheat farming and wind harvesting are a good match: leasing a small piece of land for the turbines helps provide a steady flow of cash for the owners. John and Gordon Hildebrand were among the first landowners who leased their land to wind developers. John Hildebrand pointed out: "We've got 11 turbines on our place, and they took up only 2.2 acres. My wife, who owns half the place, asked me how it compared with what we could get wheat farming on those 2.2 acres. I said, 'Never in 100 years would it even equal the installation payment.' So she says, 'I want one on every acre'" (The Dalles Chronicle October 31 2005). However, problems might occur with such a symbiosis of farming and wind energy development, but these problems are usually solvable:

I think most land owners are pretty happy with what they got, the problems involved in having a wind farm in a middle of a wheat farm aren't that horrible. You can work around it....the two industries work together pretty well (Interview 6).

Opponents' threat has been identified as low in Sherman County. Despite the benefits coming along with the wind energy development, some residents who didn't have wind turbines on their land but did get exposed to adverse visual or auditory impact were disappointed by this fact. However, their opposition didn't go far in the siting process (Interview 7). Another opponents' threat was related to environmental issues: in the proposed area of Golden Hills project, turbines could affect bird habitat and the developer's first bird mitigation plan was not adequate. The Audubon Society and the Sierra Club got involved in order to protect the habitat. A group of developers worked with Oregon Department of Fish and Wildlife and the environmental organizations in order to find appropriate habitat mitigation solutions not unique to one project but generic to several wind farms. As a result of negotiations, the parties defined one large continuous protected area instead of several small ones, which is more effective as it reduces habitat fragmentation (Interview 7).

Elite allies

As discussed above, there is no evidence that any groups were marginalized or blocked from participating in the institutional decision-making process. Despite the openness of the decision-making process, the windfall would make it difficult for opponents in Sherman County to find allies for opposition of wind energy development since a majority of the county residents supported wind development. The following quote summarizes this statement: "I think if someone wanted to object in Sherman County, they would have been heard. I am not saying people wouldn't give them hell for objecting" (Interview 6).

Supporters of wind energy have allies among state and county officials. State government officials enthusiastically supported the development of the first wind energy project in 2000. John Kitzhaber, Oregon's governor, initiated a consensus-based program led by Greg Wolf of Oregon Solutions. This program convened all interested stakeholders to resolve any emerging issues that would have stood in the way of the project's success so everyone would support the development of the project (Interview 8; O'Leary, R., Gerard, C., & Bingham, L. B. (2006). As a result, "this process allowed the project to go from conception to construction in only 12 months, a necessity due to the expiration of the production tax credit on December 31, 2001" (Ouderkirk and Pedden 2004, p.7). Mike McArthur, Sherman County Judge from 1992 through 2004, stated "Wind power helps to diversify the economy. It's another crop we can harvest, [and] it helps in the county budget" (Ouderkirk and Pedden 2004, p. 5). Gary Thompson, Sherman County Judge from 2005 up till present, noted "This project [Klondike III] brings Sherman County closer to being financially viable" (The Dalles Chronicle November 9 2006). Having allies among state and county officials helped supporters of wind energy in their efforts to facilitate projects development.

In Sherman County, many residents received tangible benefits from wind power, which justified the development of the first wind farms and actions of residents to facilitate additional wind energy development. The majority of residents supported wind energy development as they believed there would be significant tangible benefits from wind power. As discussed above, they concluded that the financial benefits generated by wind energy companies would contribute significantly to Sherman County well-being by means of diversifying income and helping wheat farming. The very first project illustrated the veracity of these assumptions. Thus, the more

projects came online, the more support wind energy development had from the majority of Sherman County. That provided active supporters with allies from a general public.

Specifically, during construction, local businesses were gaining large profits by serving workers at cafes and renting them hotel rooms and houses (Interview 5). In addition, windfall from the new industry has largely benefited many people in the county. Rather than simply adding wind revenue into the general fund, the county put together a Wind Revenue Advisory Committee, which suggested sharing some of the funds directly with local residents. Thus, every Sherman County resident receives an annual check of \$590 (The Dalles Chronicle November 22 2009; Interview 8). In addition, resources accumulated from the wind power development helped improve the county's infrastructure and upgrade school equipment. The Renewable Energy Technology Program at Columbia Gorge Community College received monetary and expert support as well (The Dalles Chronicle October 7 2008). Wind money has also benefited the county through the Sherman Development League, a nonprofit organization founded in 2000. The organization has provided loans and grants to various organizations throughout the county, including the Sherman County Senior and Community Center, public school and library system, Rufus Community Center, Columbia Gorge Arts in Education, Sherman County Ambulance, Sherman County Child Care Foundation, Sherman County Fair, and Sherman County Health District (The Dalles Chronicle March 13 2013; Interview 5).

Resources

As discussed above, after development of the first wind energy project landowners of Sherman County saw an opportunity for leasing their lands to wind developers. They started actively looking for potential developers and securing the land for siting wind energy projects. There even was a competition between two different groups of landowners trying to seek out

developers. The first group of landowners worked with Renewable Energy Systems, a developer headquartered in the UK. That group tried to secure land for perspective projects but was not successful (Interview 6). The second group of land owners officially organized their efforts and launched a private company, Praise the Wind, Inc., which became the middlemen between the landowners and the developers. The organization has had professionals who have been helping execute wind easements to make the siting process easier and faster (Interviews 4,6; The Dalles Chronicle April 14 2006). Praise the Wind, Inc. has been successful in getting landowners to sign an agreement that confirms a right to develop wind energy on their property. These signed agreements have made Sherman County attractive for developers as they would already have had secured land for wind energy development (Interview 4, 6).

Applying concepts of threat, political opportunity, and resources to explain community mobilization in support of wind energy in Wasco County

Community Context

Wasco County, unlike Sherman County, is a heterogeneous area with fairly different northern and southern parts (Interview 9). More than half of the population lives in The Dalles, the county's main city located on the Columbia River along the edge of the county (Portland State Annual Population Report). Land issues in northern Wasco County have been often high on the policy agenda (Interviews 1, 2, 3, 5, 9). In 1993, Wasco County began to work on the Transition Lands Study Area Project in response to concerns about "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area" in Sevenmile Hill (Wasco County Planning Commission December 3 2013). In 1986, President Reagan signed the Columbia River Gorge National Scenic Area Act with the purpose of "preserving the Gorge's world-class landscape, and natural, historic, and recreational values" (Blair 1986, p. 867). The Columbia River Gorge Commission, comprised of local and state representatives from Oregon and Washington as well

as one representative from the U.S. Forest Service, regulates all economic and urban development decisions in the Gorge. Houses in the Gorge are required to be visually obscure to the landscape (painting, roof color) (Interview 3). Southern Wasco County differs significantly from Northern Wasco County and, in fact, is more similar to Sherman County. Land ownership patterns consist of large tracts of land devoted to wheat farming and ranching, limiting opportunities for income diversification (Interview 1).

Threat

Historically, Wasco County's economy had several major industries (lumber, manufacturing, agriculture, tourism). The lumber industry and aluminum production had been significantly contributing to the county's tax revenue and provided employment to local residents. However, the logging industry significantly declined in the Pacific Northwest in the 1980s-1990s – partially because of the environmental regulations aimed to protect the northern spotted owl (Interview 5). In early 2000s, aluminum production was challenged by drastically increased electricity prices during the 2000-2001 energy crisis in the western United States and by decreased global aluminum prices. Thus, Wasco County had problems with filling its coffers and was looking for some means to increase its tax base and provide jobs for its residents.

Wasco County saw the example of its neighboring county bringing wind energy development: "Well, first of all Sherman County is right next door, close to eyes of many people and they got in the game early and Wasco County would very much like as the county, the administration of the county, would very much like to have access to that kind of money" (interview 5). Wasco County residents also saw benefits from the wind energy development in Sherman County. The construction phase brought many workers to the project sites, which, in fact, benefited both counties. For instance, Wasco's Lean-to Café received large profits during construction of wind projects in Sherman County (Interview 9). Residents saw other advantages

of wind energy development as well: “Our neighboring county of Sherman is getting money for new schools as a direct result of their increased tax assessment from wind development. Wind generation is providing a stable source of revenue for landowners and county tax roles. While property values may decline, the wind turbines are tangible assets” (The Dalles Chronicle March 31 2009). However, supporters’ threat in Wasco County has been present much less compared to Sherman County where wind energy has been considered as a panacea for improving the county’s economic situation.

In contrast, opponents’ threat has been exceptionally high among some Wasco County residents. In particular, Cascade Wind, the first Wasco County large-scale project on Seven Mile Hill, evoked tremendous public opposition (Interviews 1, 2, 3, 5, 7, 9). This project would have been located just outside of the National Scenic Area, which raised huge concerns regarding visual pollution. Widge Johnson, a resident of The Dalles, wrote to the newspaper: “Yes, we do need green energy; and there are many good choices for windmill placement which are not in the middle of a scenic area. Tourists are not coming here to see windmills; they come for the beauty of the gorge.... We need to be stewards of this beauty” (The Dalles Chronicle June 19 2007).

The area lies in an ecological transition zone between the “wet West side” of Oregon and “the dry East” side separated by the Cascade Mountains. As a result, the area includes unique habitat zones, such as the pine-oak habitat, that are difficult to replicate elsewhere. In addition, the proposed site was surrounded by a large number of local residents who owned small, expensive parcels of land. Many of these residents had moved to the area relatively recently because of the highly valued pristine landscape (Interview 6). Some homeowners would have been living less than 1.5 miles from the wind turbines (The Dalles Chronicle May 1 2007). These

concerns generated rigorous opposition from local residents whose efforts were backed by outside environmental groups such as Friends of the Gorge and the Audubon Society.

Kelley Gorton in her letter to the editor titled “It's all about location” referred to the aforementioned landowner of Sherman County who leased his property to the wind companies: “Mr. Hildebrand, I didn't think you were "screwed up living in the wind patch of Sherman County." Being out in the middle of a wheat field is entirely different than being in the middle of the Scenic Gorge. You seem to be happy having them on your property so I say great, have them out there in Sherman County but not on our hill [Seven Mile Hill] (The Dalles Chronicle July 15 2007). This quote emphasizes the importance of site-specific characteristics in community reaction to a particular wind energy project.

The second proposed project, Summit Ridge, was located near the border with Sherman County and was given a site permit by the Oregon Energy Facility Siting Council. Similar to the neighboring county, high level supporters’ threat and low level of opponents’ threat was identified on that Wasco County site. The last proposed project, Brush Canyon, faced concerns regarding disturbance of the community’s remote area by visual impact and construction nuisance as well as bat and bird kill.

In sum, Wasco County was divided in residents’ perceptions toward costs and benefits of proposed wind energy projects. The framing of opponents’ threat varied among the projects and was specific to projects’ location. The high level of threat was indicated in regards to Cascade Wind proposal where opponents didn’t see any opportunity for mitigating the project’s adverse impacts. According to opponents, that site was not suitable for a wind energy facility by any means. As opposed to Cascade Wind, in Brush Canyon project threats identified by opponents were characterized as solvable issues with a potential for their mitigation.

Elite allies

Informal power structures represented by elite allies was varied in Wasco County while more uniform in Sherman County. These differences between Wasco and Sherman counties reflect the specifics of the wind energy projects' locations and include biophysical and socioeconomic factors. As illustrated above, officials in both counties have generally supported wind development because of its potential economic benefits. However, in Wasco County local officials were more cautious in their support of the controversial Cascade Wind project.

In Wasco County, there was some resentment on the Columbia River Gorge Commission because the closest wind turbines were just outside the National Scenic Area. Yet, the Commission could not officially block the application because the Scenic Area does not have any buffer zone and technically turbines would be outside the designated area (Interview 5). Concerned for the controversy that the Cascade Wind project generated, decision makers made sure that people understood how to raise their concerns in an appropriate way. The following quote of a local official corroborates this point: "It's not that we encourage them to oppose but it's our responsibility to ensure that they understand how to testify in a way that they continue to participate in a process." Scott Hege, an active project opponent stated "There's a process [siting process through EFSC] and we're able to be part of the process" (The Dalles Chronicle June 12 2007).

The decision makers held an additional public meeting two months after the notice of intent. This meeting was unusual because normally the Energy Facility Siting Council does not hold public meetings until the developer files a complete application. In the case of Cascade Wind, the application was not complete but that meeting aimed to address the public request to meet directly with the Council. Adam Bless, the Council's staff explained the purpose of that "information-gathering" meeting: "I heard two things at the previous meeting: Where is this

council, and when do we get to talk to them directly, instead of through staff"? Five out of seven Council members were present at that meeting.

Similarly, opponents from Wasco County acknowledged in the interviews that EFSC Staff made a determined effort to explain the official decision-making process by meeting with the residents of Seven Mile Hill at one of the neighbors' homes. Oftentimes, public comments do not reflect legal standards; so they can't be incorporated in the official process. For example, the claim that a wind farm would ruin someone's view or decrease property values will not make a difference in the official process (Interview 6). Therefore, that meeting was devoted to clarifying for residents that if they want to have a say in the siting process they need to look at what the standards are and then make a convincing case that the project might not meet one of those standards.

Furthermore, the efforts made by Wasco County officials to devise effective local wind ordinances represents another example of the role that elite allies played in the Cascade Wind project. Right after the developer notified the state of their intent to build a wind farm on Seven Mile Hill, Todd Cornett, Wasco County planning director at the time, organized a public meeting in front of the county commissioners to discuss county ordinances pertaining to wind energy siting that encompassed land use and development ordinances and a comprehensive plan. Due to the controversial nature of the project, the meeting also sought to clarify how the ordinances should be interpreted in order to minimize a number of subjective issues. Commenting on ordinance revisions provided citizens with additional opportunities to participate in the siting process. According to Todd Cornett, about 100 people came to the meeting. He pointed out that organizing such a meeting was unusual and never before had local government officials done that. As he also specified: "Because I knew how controversial it was going to be, and it was

going to be a lot of opposition and we at least wanted to make sure that people, all the interested groups were aware of what the standards were and how the county was going to interpret them. It gave an opportunity for people to testify and potentially influence the county commissioners.” In other words, the specific circumstances of the Cascade Wind site contributed to the case controversy, which made some decision makers allies with opponents.

Resources

In Wasco County, some of the business owners and other community members could see revenue from wind energy development and it was in their interest to promote that. However, there was not a desperate necessity for income diversification compared to Sherman County where: “It wasn't big organized group, it was more individuals who would speak up and say, "This county could use the money and we could use the money and everybody would be better off if there's more money around." Those kinds of arguments, they weren't very strong, but they were there” (Interview 5). In other words, supporters did not possess significant capacity for collective actions to promote wind energy.

In contrast, opponents have been endowed with resources necessary for their mobilization against wind energy development. The first meeting held by EFSC served as a networking opportunity for opponents. They could identify people who had concerns regarding the proposal; Scott Hege, a Wasco County commissioner now, cheered up the concerned residents "Let's not get all upset, we can fight this" (Interview 2). Shortly opponents formed a nonprofit organization, Families for Seven Mile Hill, to coordinate collective efforts in the official siting process. To submit effective comments, opponents divided sections of the application among themselves to conduct extensive research on various issues (noise, wildlife habitat impact, etc.) (Interview 2). Residents living in the Seven Mile Hill area came there relatively recently to enjoy the pristine

landscape. For instance, Scott Hege had moved to the area six years ago, Tom Quinn had lived on Seven Mile Hill for a year – both are active opponents of the project (The Dalles Chronicle June 24 2007). These individuals are affluent, highly educated professionals (lawyers, doctors, journalists, etc.) and could contribute to the mobilization efforts with their professional knowledge. Boudet and Ortolano (2010) pointed out the important role of newcomers in mobilization against siting of liquefied natural gas facility in northern California.

Because of the high political opportunities discussed above and the resources provided by affected residents to the community, opponents structured their comments to EFSC to reflect the EFSC legal standards. The EFSC staff wrote a letter to the developer asking to clarify their compliance with some standards and answer opponents' concerns in a more detailed manner. For instance, Adam Bless mentioned that they asked for more information, for instance, because the application "didn't fully describe what the visual impact on the national scenic area would be" (The Dalles Chronicle June 12 2007). According to the interview with an EFSC Staff member, residents' concerns do make a difference: "If we know there is going to be a lot of controversy about scenic resources, we are gonna make sure that we've really really evaluated the scenic resource issues and we have very good findings." The following quote of Adam Bless, an EFSC staff, corroborates this point: "Cascade Wind is very controversial and thus must be approached with greater scrutiny (The Dalles Chronicle June 12 2007).

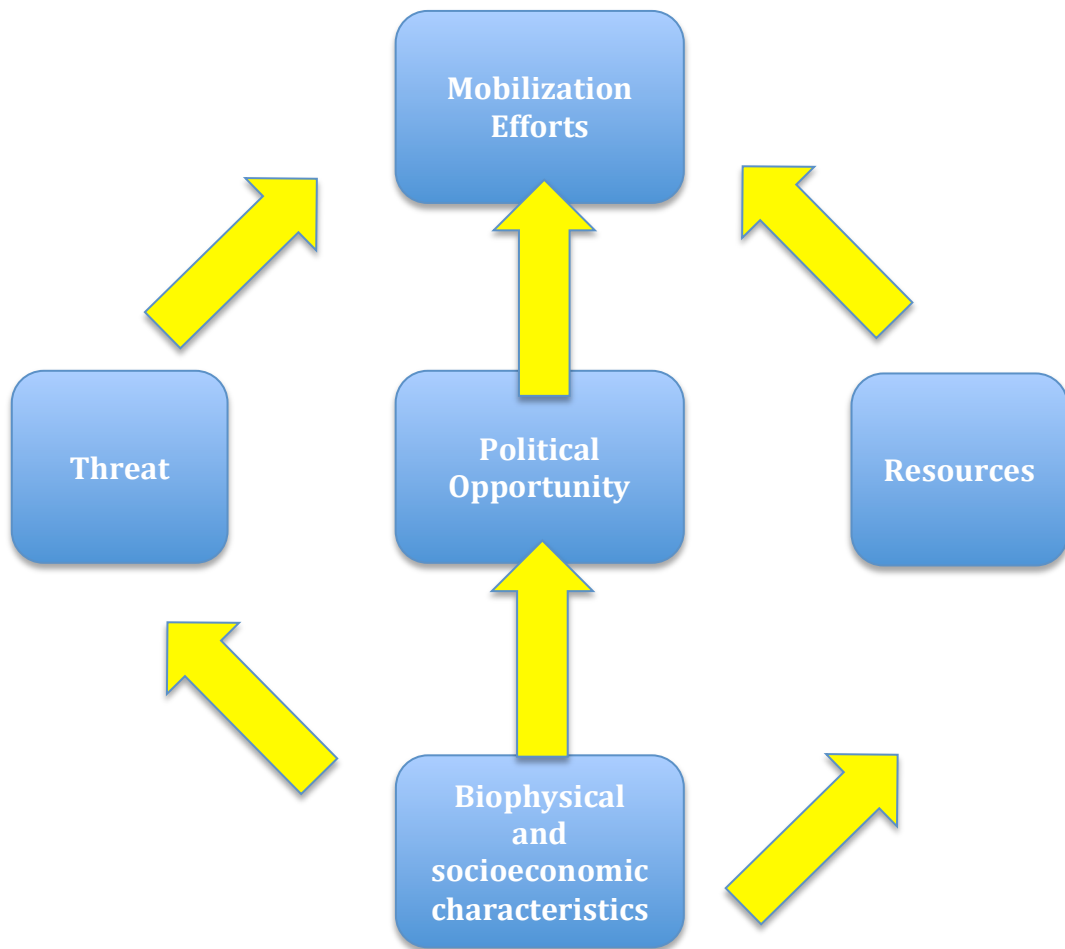
One interviewee pointed out the importance of previous participation in institutional decision-making processes: "Usually you have all these projects and people get very emotional about them. Some people don't have background participating in any kind of process and so it's very difficult for them to figure out how to be, how to function in that process in a best possible way" (Interview 9). Indeed, people who had participated in the siting process of Cascade Wind

project, continued participating in the process of siting the Brush Canyon project. In addition, negative experience of Cascade Wind siting shaped people's perceptions of future proposals (Interview 9).

To sum it up, resources allowed opponents to use advantage of political opportunity. Their comments made a difference in the official siting process. They were conducting research and persistently participated in the siting process through interacting with local elected officials, writing letters to the editor, attending and commenting at public hearings. In an interview, a state official stated "Well, I think in the end the issues people brought up made a difference."

Discussion

Wasco and Sherman counties have followed the same institutional decision-making structure but have experienced completely different mobilization outcomes. Differences in biophysical and socio-economic context influenced resident perceptions of threat, resources and political opportunity (elite allies' formation).



In Sherman County, one could observe a path for wind energy development with general community support and effective actions of landowners in support of a new industry. In Wasco

County, a divergence has taken place in community reaction toward wind energy with larger support in some areas and larger opposition in other. A set of explanatory factors helps understand why and how communities took actions in response to the possibility of wind energy development. In Wasco County, high level of threat, high level of political opportunity, and high community resources empowered mobilization in opposition to the Cascade Wind project. Other residents expressed support of wind energy development, but they didn't organize their efforts as opponents did. Lower level of supporters' threat contributed to such an outcome. In Sherman County, high level of threat, high political opportunity, and high community resources contributed to the growth of residents' organized support of wind energy. Residents mobilized their efforts in the form of active searching for wind energy companies and facilitating siting process. In both cases, the first project had significant influence on the path of wind energy development that each county followed.

In Wasco County, there was a distinct difference in positions of residents living in the North and in the South toward wind energy development. Residents of the northern part highly valued pristine landscapes and unique wildlife habitat. Residents of the southern part were making a living by cultivating their lands and considered land as a source of income. Farmers and ranchers comprised the sparsely populated area of Southern Wasco. In fact, these characteristics were similar to ones of Sherman County. These differences reflect the differences in biophysical and socio-economic characteristics of two parts of the county. This variation could be, for instance, observed in the county's wind ordinances revision. People living in South Wasco wanted to have an option of waiving the required setback while residents of North Wasco wanted to make the setback as large as possible.

In Wasco County, developers faced unexpected efficacy of opposition toward the Cascade Wind project (Interviews 1, 2, 3, 5, 6, 7, 9). One of the reasons is they didn't conduct quality community outreach. Arnstein (1969) argues that "there is a critical difference between going

through the empty ritual of participation and having the real power needed to affect the outcome of the process” (p. 216). The author defines three levels of public participation: 1) nonparticipation represented by therapy and manipulation and aimed to educate and cure participants; 2) tokenism represented by informing, consultation, and placation when citizens are heard but they do not have the power to decide and influence final outcomes; 3) citizen power represented by partnership, delegated power, and citizen control with the citizen’s great power in the decision making. In the Cascade Wind project, a small area of high quality wind resource and existing transmission lines made the proposed site extremely attractive for wind energy development. Decisions to put a wind project in that location were already made and the developers had little flexibility to take into consideration public input and mitigate the project’s adverse impacts (Interview 1). This led to tokenism in public participation: residents had an opportunity to raise their concerns but it did not make any difference in the developer decision making about the project siting.

A growing literature suggests that collaborative siting process yields better outcomes among all stakeholders. However, “these calls for public participation include little detail about how it should be carried out and may oversimplify and idealize the promise of participatory processes” (Bidwell 2016, p. 1). According to one interviewee, developers should reach out to community leaders before they make a decision to site a wind energy project in a certain location. The goal of such outreach should not be to educate residents about potential benefits but to discern community position. This approach helps create shared goals by taking into account rationales of all interested parties, which will reduce a risk of a contentious project. Schenk and Stokes (2013) suggest using the consensus building approach and deliberative opinion polling while designing a wind energy project. In sum, further research should look

closer at mechanisms of participatory process in the wind energy siting focusing on the developer-public interactions.

Conclusions

Current research examined factors that have influenced communities' actions of either support or opposition toward wind energy projects, comparing empirical data of wind energy developments in two neighboring Oregon counties. I found that factors drawn from the studies of social movements (threat, political opportunity, and resources) were able to provide a conceptual framework to understand why and how communities mobilized their efforts. Literature on public perceptions and attitudes toward wind energy siting provided valuable insights to further specify concepts of the aforementioned factors. In addition, biophysical variables as well as social and economic conditions have led to differences in the main explanatory factors.

Interviewing a panel of informants (government, industry, community, environmental organizations, and academia and media representatives) has provided information about wind energy siting from different perspectives. This contributes to an increase in internal validity of the research findings. However, it is necessary to be skeptical and try to find alternative explanations. For instance, potential threats for validity are that interviewees might be not completely honest due to different reasons. For instance, some aspects of professional ethics could lead to a situation when government officials and industry representatives might not be willing to fully talk about all the details of their jobs. These caveats might negatively affect the overall research results. The possible way to mitigate these threats was to put efforts for building a strong rapport with interviewees by clearly explaining the project goals and intentions of a researcher.

According to McAdam and Boudet (2012) the “paired comparison” remains the richness of the case-study method and at the same time helps overcome the obvious limitations of the single case. Despite this study's benefits of providing detailed findings on the area of inquiry, this

research has limitations in terms of generalizability of its findings on other cases. Opposite, studies with large numbers observations while capable of making generalizations to larger population, might drop important details due to necessary sacrificing quality for quantity. McAdam and Boudet (2012) employ the fuzzy set/Qualitative Comparative Analysis to examine mobilization attempts to energy facilities siting. The authors argue that such middle ground approaches would help to “preserve the empirical integrity of each discrete case while still allowing for generalization to a broader population cases” (McAdam and Boudet, 2012, p. 32). Thus, this methodology would benefit the analysis of community mobilization efforts toward wind energy development.

In terms of policy recommendations, this research might be valuable for all the main stakeholders of wind energy siting processes. State and local government officials could benefit from the knowledge on what factors help communities raise their voices and how regulatory procedures might influence siting process. Thus, in order to decrease siting contentiousness, decision makers should clearly define siting regulatory structures because not well enough specified wind energy regulatory documents (such as county wind ordinances and state siting standards) bring uncertainty to siting processes. This leads to unclear expectations of developers and communities regarding potential projects and consequently contributes to contentiousness in the siting process. Regulatory documents should contain thorough definitions and specific requirements that address all potential concerns so that no issues become a surprise for the stakeholders later in siting process. Community members might consider the examples of efforts’ mobilization to support or oppose wind energy development. Specifically, as current research illustrates, successful mobilization efforts could be explained by presence of adequate community resources and support by the elites. Developers could get insights on what siting strategies to implement in order to avoid contentious cases. The location

of a future project should be wisely chosen by a developer in collaboration with a local community. In some cases, such collaboration might suggest that a particular location is absolutely not appropriate for wind energy development. In this scenario, developers should not proceed with project applications, which would prevent contentious cases and as a result save developers time and money.

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Appendix. Interview Protocol

Questions for agency staff / city planners / county officials

1. Please tell me about the issues that have historically driven politics in your community, prior to the announcement of any particular renewable energy (“wind”) projects (education, land use, employment, etc.).
 - a. Please list the community groups that were most active prior to the announcement of any particular renewable energy (“wind”) projects.
 - b. What were the specific interests and concerns of each of these groups?
 - c. How responsive have elected representatives / decision makers been to community groups in the past? Can you provide specific examples?
2. What can you tell me about the individuals and groups that have been active during the siting of the recent renewable energy (“wind”) projects (environmental groups, businesses, neighborhood associations, unions, etc.)? [Provide list of proposed projects and dates if needed.]
 - a. What were the specific interests and concerns of each of these groups?
 - b. How did these groups come together / form in response to the proposal(s)?
 - c. How would you characterize the response of elected representatives / decision makers to each group’s interests? Can you provide specific examples?
 - d. How would you characterize the response of the proponent(s) of the project(s) to each group’s interests to particular groups’ interests? Can you provide specific examples?
 - e. How would you characterize the resources available to opponents of the project(s)? supporters of the project(s)?
 - f. Have community groups been receiving support, monetary or otherwise, from outside the community?
 - g. What were the stances of political and business leaders in the community about the project? Did they changed over time? Why?
3. What forms of public participation did elected officials, proponents, and decision makers use during the process of siting the project(s)?
 - a. What was the nature of public involvement in the planning process?
 - b. What role did you play in this process?
 - c. What forms of public participation were used by the elected representatives / decision makers during the process? By the proponent(s)?
 - d. When were these participation processes implemented?
 - e. Did you attend or facilitate any of these processes?

- f. Were all interested parties fully able to express their concerns?
 - g. In your opinion, were there any groups that were left out of or marginalized from these processes? Why or why not?
 - h. What role did experts or expert knowledge play in providing comments on the project(s)? Can you provide specific examples?
 - i. Were you or others concerned about possible conflicts between the expansion of renewable energy and existing state and federal environmental regulations (e.g. Endangered Species Act)? Can you provide specific examples?
 - j. What role did the comments play in the decision making process? Can you provide specific examples of changes made to the plan as a result of comments received?
4. How have community members and groups made their voices heard outside of these processes for participation in decision-making (ballot initiatives, letter-writing campaigns, protests, social media, etc.)?
- a. Have you been surprised by the community's reaction to these proposal(s)? Why or why not?
 - b. Did you anticipate lawsuits as a result of the siting process(es)? If so, around which issues?
 - c. Have particular events or actions galvanized community involvement or action regarding the siting proposal(s)? Probe here.
 - d. [If multiple projects were proposed in the county] Were any projects more controversial than others? If so, why?
5. Are there any important issues related to the project(s) that we haven't covered yet?

Questions for Active Community Members

1. I would first like to ask you some questions about your political involvement prior to the announcement of the proposed facility.
 - a. Did you attend city/county/agency meetings prior to the announcement of renewable energy (“wind”) projects? If so, which ones/dates? If so, please tell me about the types of political issues that you were most interested in.
 - b. Prior to the announcement, were you involved in any community groups?
 - c. Did you participate in any other political activities, outside of official meetings/hearings, prior to the the announcement of renewable energy (“wind”) projects?
 - d. Have you run for political office?
 - e. How responsive have elected representatives and business leaders been to community groups in the past? Can you provide specific examples?
 - f. What issues have historically driven politics in the community (education, land use, employment, etc.)?
2. Did you attend city/county/agency meetings about the renewable energy (“wind”) projects?
 - a. If so, what was it about the (“wind”) issue that got you interested in attending? If not, why not?
 - b. Did you get involved as part of a community group? Which one and why that group?
 - c. What are your specific interests and concerns about the (“wind”) proposal(s)?
 - d. Do you feel your voice has been heard during the process?
 - e. How would you characterize the resources available to supporters and opponents the renewable energy (“wind”) projects?
 - f. Have you (or your community group) been receiving support, monetary or otherwise, from outside the community?
 - g. What role did experts or expert knowledge play in providing comments on the project(s)? Can you provide specific examples?
 - h. Were you or others concerned about possible conflicts between the expansion of renewable energy and existing state and federal environmental regulations (e.g. Endangered Species Act)? Can you provide specific examples?
 - i. What are the stances of political and business leaders in the community about the project? Have they changed over time? Why?
3. Have you participated in any other political activities, outside of official meetings/hearings organized by the city, in response to the siting proposal, including ballot initiatives, letter-writing campaigns, protests, etc?
 - a. Have you been surprised by the community’s reaction to the siting proposal? Why or why not?
 - b. Have particular events are actions galvanized your involvement regarding the siting proposal? Probe here.
 - c. [If multiple projects were proposed in the county] Were any projects more controversial than others? If so, why?
4. Are there any important issues related to the project(s) that we haven’t covered yet?

Questions for Project Representatives

1. What are the main criteria your company uses for selecting the site of a renewable energy ("wind") project?
 - d. How did this site(s) match up with those criteria?
 - e. What sort of background information did you collect on the community prior to the announcement of the siting proposal?
 - f. What was the initial response of influential individuals in the community to your proposal? Has this changed over time?
 - g. What was the initial response of local citizens or groups to your proposal? Has this changed over time?
2. What forms of public participation did your company use during the siting process?
 - a. When were these participation processes implemented?
 - b. Did you attend or facilitate any of these processes?
 - c. Were all interested parties fully able to express their concerns?
 - d. Would you characterize the public input process associated with the project as fair? Why or why not?
 - e. What role did experts or expert knowledge play in providing comments on the project(s)? Can you provide specific examples?
 - f. Were you or others concerned about possible conflicts between the expansion of renewable energy and existing state and federal environmental regulations (e.g. Endangered Species Act)? Can you provide specific examples?
 - g. What role did the comments play in the decision making process? Can you provide specific examples of changes made to your plans as a result of comments received?
3. How have community members and groups made their voices heard outside of these processes for participation in decision making, including ballot initiatives, letter-writing campaigns, protests, etc?
 - a. Have you been surprised by the community's reaction to your siting proposal(s)? Why or why not?
 - b. Do you anticipate lawsuits as a result of this siting process(es)? If so, around which issues?
 - c. Have particular events or actions galvanized community involvement or action regarding your siting proposal(s)?
 - d. [If multiple projects were proposed in the county] Were any projects more controversial than others? If so, why?
4. Are there any important issues related to the project(s) that we haven't covered yet?