

# PERCEPTIONS OF THE IMPACT OF WIND ENERGY GENERATION IN COASTAL COMMUNITIES

## Regulation Issues

*prepared by the msu land policy institute and the great lakes commission*

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### Introduction

Wind energy can summon strong responses from community residents, whether or not a wind farm has been proposed. Qualifying the reasons for these reactions involves a look into what wind represents for different people in different places.

For some, wind energy means energy security and independence, cleaner air, cleaner water, slowing the effects of climate change or an economic development opportunity. For others wind power developments represent a dramatic change to a community and an industrial incursion into rural landscapes. This may include a change in property values, environmental risks, impaired aesthetics and even a change to a community's identity.

The challenge to objectively considering wind development is in finding the balance between the concerns and anxieties of a community and the benefits they would receive. The way the current system operates, most of the intended benefits of wind energy are felt at the state or national level—jobs may be created throughout a state, or the country may become less reliant on non-renewable sources of energy. Local benefits, including new jobs, a cleaner environment and steadier energy prices, are tempered by real or perceived negative effects of wind. Finding ways to balance the risks and rewards of wind energy is essential. As with all potentially controversial issues, it may not be possible to reach consensus on wind energy, but exploring the issues in depth with a community can help educate those community members who may not have yet formed an opinion on wind power.



In early 2010, the Michigan State University (MSU) Land Policy Institute (LPI) sent a mail survey to 300 randomly selected households in each of the study areas (900 total surveys mailed). Three-hundred seventy-five surveys were returned for a response rate of 45%. The survey consisted of closed-end questions centered on the following themes: attitudes towards commercial wind farm development, perceived effects of wind farms, distributive and procedural fairness and general values and environmental beliefs. Most of the questions asked respondents to consider how they would feel about a commercial wind farm development in or near their community—defined as the township, village or city in coastal Michigan where they live during all or part of the year. The remainder of this factsheet focuses on the results of the survey regarding regulation issues.

## Introduction (Cont.)

### Regulation

The level of government that should be charged with regulation for siting, zoning and planning for wind energy development has been the topic of much deliberation in the United States. Regulation issues have been addressed at different levels in different states within the Great Lakes Region. For example, in Wisconsin, Senate Bill 185, which was signed into law in October of 2009, requires the Wisconsin Public Service Commission to establish statewide rules on planning and siting wind energy generation. Minnesota divides the process into large (over 25 megawatts (MW)), medium (5 to 25 MW) and small (under 5 MW) developments, with State authority over large wind developments, State or local authority over medium developments (local if the local governments assume authority), with local regulation only applying to small wind projects (Minnesota Statutes Chapter 216 F). In Michigan, authority is exclusively local, delegated by the State to cities, villages and townships in the Michigan Zoning Enabling Act of 2006. Given the diversity of solutions enacted as to who should regulate wind energy developments and the diversity of legal regulation, there is a valid question related to the public's opinion on where this regulatory authority should be housed, and how it should be implemented. This factsheet summarizes the opinion of the public in some coastal communities regarding regulation, public trust and the process of local regulation development as they relate to wind farm development.

## Opinions of Coastal Residents

### Setting Legal Standards for Commercial Wind Farms in Michigan

Respondents were first asked "To what extent do you support or oppose the following entities setting legal standards for commercial wind farms in Michigan?" Responses are depicted in Figure 1.

#### *Townships and Cities*

When asked to what extent they support or oppose townships and cities setting legal standards for commercial wind farm development in Michigan, the highest percentage of respondents, 39%, say they are in support. This is followed by the 23% respondents that are neutral, 16% indicating strong support and 13% in opposition. Nine percent express strong disagreement that townships and cities should set the legal standards for commercial wind farm development in the state.

#### *Counties*

Nearly half of the participants, 46%, are in support of counties setting standards for commercial wind farm development. About a quarter, 26%, are neutral about county-level legal standards. Fourteen percent

## Opinions of Coastal Residents (Cont.)

indicate they strongly support this. Those in opposition, and those in strong opposition account for 7% each of responses on the role of counties setting the standards for commercial wind development.

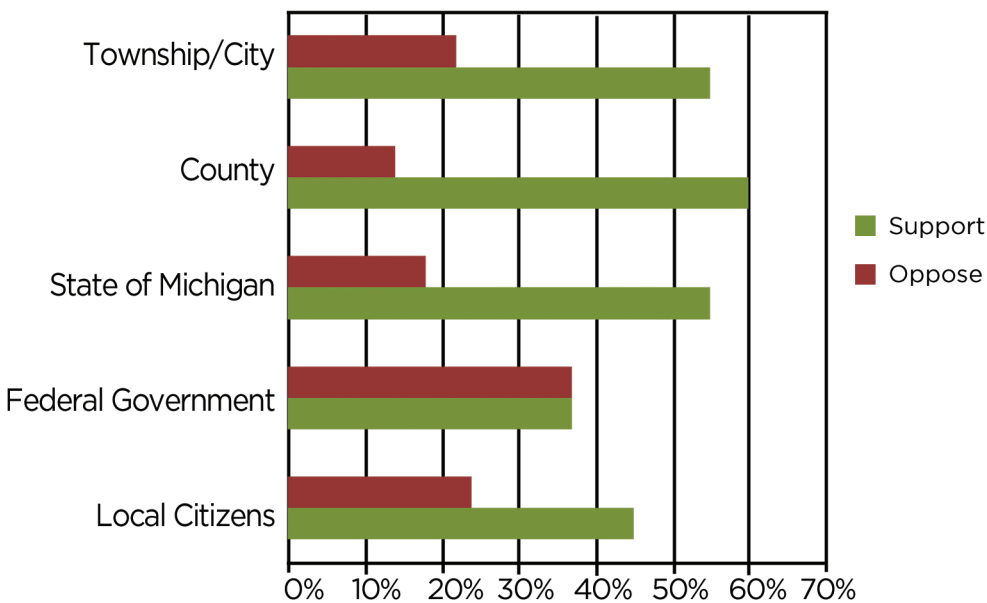
### State of Michigan

Thirty-seven percent of participants say they support the State of Michigan setting the legal standards for wind farm development. The second highest response rate belongs to those who are neutral. After that, 18% are in strong support and 10% are in strong opposition, with 8% in opposition of the State of Michigan setting the legal standards for wind farm development in the state.

### Federal Government

The survey also asked to what extent participants support or oppose the federal government setting standards for commercial wind farms. Approximately half of the respondents are either neutral or in support of federal regulation at 26% and 25%, respectively. Nineteen percent oppose federal control, closely followed by 18% who strongly oppose it. Finally, 12% of respondents strongly support federal-level regulation of commercial wind farms.

Figure 1: To What Extent Do You Support or Oppose the Following Entities Setting Legal Standards for Commercial Wind Farm Development in Michigan?\*



\*The graph shows the sum of agree/disagree and strongly agree/strongly disagree, with neutral results omitted for clarity.

## What We Heard from Our Focus Groups About Governance and Fairness

### Pros

- Local control via zoning authority

### Cons

- Uncontrolled development in areas that do not have ordinances
- Exploitation of communities and land owners
- Weak standards
- Inconsistent standards within counties/regions
- Development on one property might limit development on neighboring properties
- Decommissioning/removal of projects
- Lack of transparency in development

## What We Heard from Our Focus Groups About Governance and Fairness (Cont.) Information Gaps/ Remaining Questions

- Role of counties and the state in setting standards.
- Can private lands be condemned for wind farm development?
- Do citizens have a say in siting and planning?
- More assistance is needed in the development of ordinances.

## Opinions of Coastal Residents (Cont.)

### *Groups of Citizens*

Participants were then asked if they are in support of legal standards being established by groups of local citizens. Close to half of the respondents, 45%, indicate they are supportive (29%) or strongly supportive (16%) of this concept. Those who are neutral about groups of local citizens setting legal standards for wind farm development make up 31% of the responses. Those in opposition and those in strong opposition make up 12% of respondents each.

### **Design and Implementation of Technical Standards for Wind Development**

Respondents were then asked a series of questions related to the design and implementation of technical standards for wind development. See Figure 2 for the response breakdown.

### *Technical Requirements*

More than half of the respondents, 58%, are neutral as to whether or not the current technical requirements for siting wind farm projects are satisfactory. Of the remaining responses, twice as many feel some degree of satisfaction rather than some degree of dissatisfaction. Those indicating satisfaction make up 20% of respondents, while only 10% say they are dissatisfied. Of the remaining 12%, 8% say they are very satisfied, while 4% say they are very dissatisfied with current technical requirements for wind farm projects.

### *Public Input*

When asked how satisfied they are with current laws requiring opportunities for the public to voice their concern in relation to potential wind farm developments, 40% of respondents are neutral. The next highest response rate belongs to the 26% that are satisfied, followed by 17% that are dissatisfied and 10% that are very satisfied. Only 7% of those surveyed are very dissatisfied with the current opportunities for the public to voice concerns on potential wind farm developments.

### *Site Studies*

When asked how they feel about current requirements on studies of proposed sites for wind farm development, nearly half of the participants, 49%, are neither satisfied nor dissatisfied and indicate a neutral response. Twenty-one percent say they are satisfied, while 16% indicate dissatisfaction. Those that feel very strongly about the subject are evenly split, with 7% feeling very satisfied and 7% feeling very dissatisfied about current requirements on studies of proposed sites for wind farms.

## Opinions of Coastal Residents (Cont.)

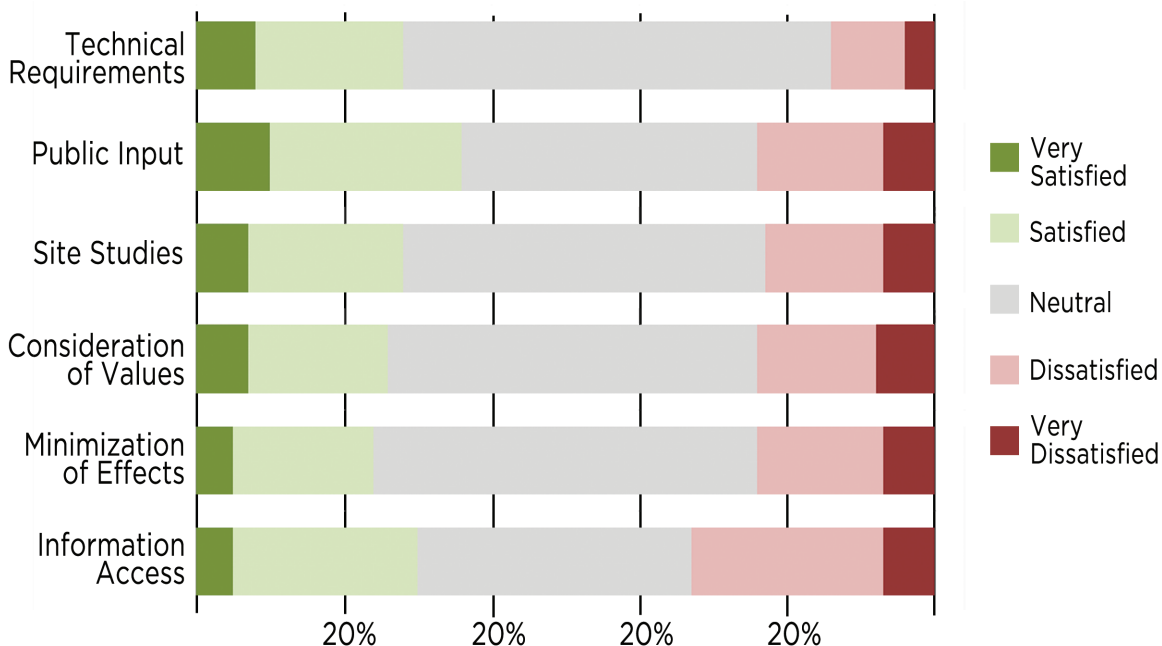
### *Consideration of Community Values and Priorities*

Survey participants were also asked how satisfied they are with the requirements of wind farm developments to consider the values and priorities of the communities nearby. Half of the respondents indicate they are neutral on the subject. The remaining responses are nearly split between those having some degree of satisfaction and dissatisfaction with such requirements. Those satisfied with the requirements account for a slightly larger percent (19%), than the 16% indicating dissatisfaction. Those who are very dissatisfied account for a slightly larger percent (8%) than the 7% saying they are very satisfied with the requirement of wind farm developments to consider the values and priorities of the nearby communities.

### *Minimization Development Effects*

The survey inquired whether or not participants are satisfied with current laws aimed at limiting the potential effects of wind farm development on the community. In response, 52% are neutral on the subject. Nineteen percent say they are satisfied with the current laws, while 17% indicate they are dissatisfied. Finally, 7% of the respondents are very dissatisfied and 5% are very satisfied with the current laws on limiting the potential effects of wind farm development.

Figure 2: Level of Satisfaction with Requirements in Current Laws or Standards for Wind Farm Development



## Opinions of Coastal Residents (Cont.)



### *Information Access to Projects*

Survey participants were asked to what extent they are satisfied or dissatisfied with requirements in current laws or standards related to access to information about wind farm development projects in their community.

The highest percentage of the respondents, 37%, are neutral on the subject. The second largest segment (26%) belongs to those feeling dissatisfied with the current standards. This is closely followed by the 25% that are satisfied. The remaining 12% of respondents either feel very dissatisfied (7%) or very satisfied (5%) with the requirements in current laws or standards relating to access to information about wind farm projects.

## Discussion

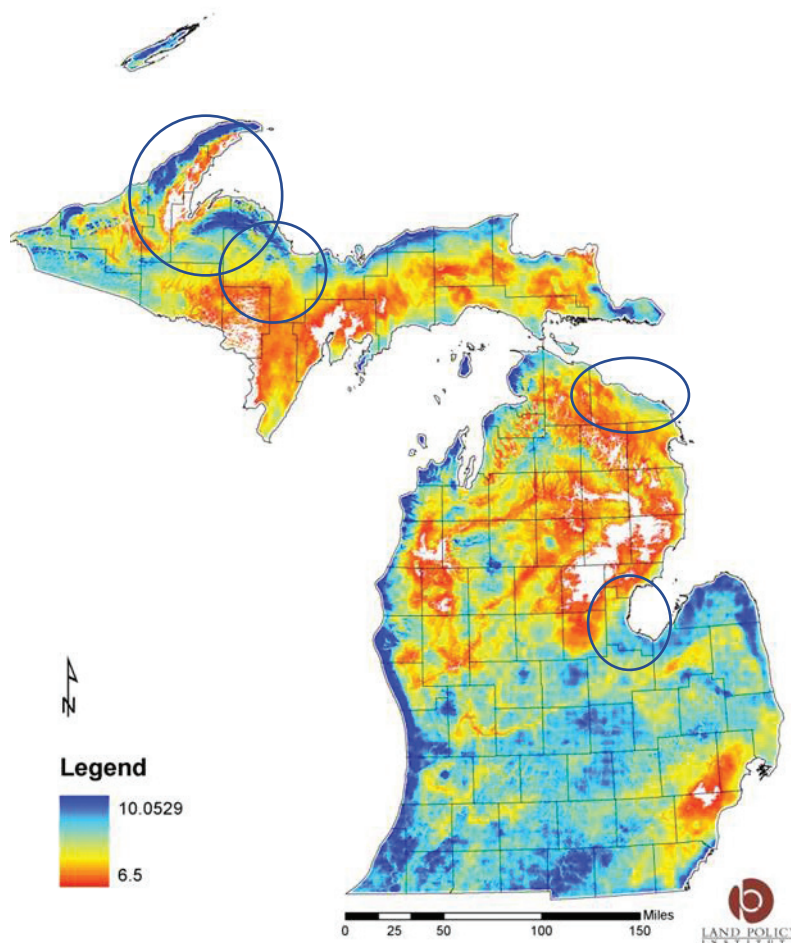
Survey participants were overwhelmingly neutral on most questions about State and local regulations for wind projects in Michigan. This high degree of ambivalence could indicate that respondents may be largely lacking information related to how the regulatory process functions, what policy is in place, and how they can actually participate. In addition, the levels of support for State-level regulation, county-level regulation and local regulation are roughly equal, which indicates that local policy may not be as strongly preferred as the state regulators and policy makers have assumed. Furthermore, as indicated in "Trust and Fairness Issues" factsheet in this series, when asked about the ability to make technically sound decisions, developers and county-level or higher governmental bodies were clearly preferred by those non-neutral respondents to the survey. This was echoed by sentiments expressed in focus groups that were also held as part of this project, as well those indicating concerns regarding the ability of local planning commissions to interpret and appropriately respond to the complex technical studies usually required as part of the permitting process. Respondents tended to generally support the development of wind power regulations—whether by the State, counties, townships or municipalities (with input from local citizens), although there were many neutral responses for each of these.

Despite the overall lack of preference for enforcement at any level of government, participants showed a much higher opposition to regulation by the federal government. Targeted educational workshops on this topic may help to increase interest in this area, as well as help to foster appropriate community action.

## Project Description

Michigan is recognized as a state with strong wind energy development potential. Windy, coastal communities will face pressure to develop wind farms for many years to come. This factsheet is part of a Michigan Sea Grant-funded integrated assessment of wind energy in coastal communities. During 2010, the MSU Land Policy Institute hosted focus groups and surveyed residents in Michigan coastal communities to understand their perceptions of wind energy. As referenced in Figure 3, the coastal community areas selected as the focus of the study included Bay County, Presque Isle County, and a four-county area of the Upper Peninsula (Baraga, Houghton, Keweenaw and Marquette counties).

Figure 3: Map of Focus Area Communities with Wind Resource at 100 Meters (m/sec)



Map Produced by Land Policy Research at the Land Policy Institute, Michigan State University, 2009.

## Wind Farm Development in Coastal Communities Integrated Assessment Factsheet Series

1. Community Views
2. Energy Policy Priorities
3. Regulation Issues
4. Trust and Fairness Issues
5. Impact Perceptions
6. Project Overview

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## Project Description (Cont.)



Through the survey and focus groups, LPI identified the costs, benefits, consequences and optimum approaches for locating wind energy-generating facilities in Michigan coastal communities by assessing multiple factors that affect their siting. As a result, an integrated assessment tool was developed that these communities can use for creating policy and making decisions about such facilities.

The MSU Land Policy Institute partnered with the Great Lakes Commission, the Great Lakes Wind

Collaborative and the MSU Environmental Science and Policy Program throughout this project. These groups also provided assistance to LPI for this project. This factsheet #WND-3 is part of the Wind Farm Development in Coastal Communities Integrated Assessment factsheet series. Results of the project will assist Michigan coastal communities with assessing multiple factors that affect the siting of wind generating facilities. Communities may use the tool for developing legally and technically sound policy and making decisions about such facilities.

For more information on this project and to view the other factsheets in this series, please visit [www.landpolicy.msu.edu](http://www.landpolicy.msu.edu) and click on the project link in the green "Check out LPI" box in the left-hand column of the site.

*Photos by stock photography, front cover; Steve Ford Elliot, pg. 6; and Stephen O'Neil, back cover.*

