

WIND ENERGY SURVEY 2016



Portland State
UNIVERSITY

Please follow the skip instructions in the survey so you only answer the items that are applicable to you. Your responses are **voluntary** and **confidential** – **your answers will never be linked to your name**. If you need more space for your answers, please use the comment section at the end of the survey.

If you have questions: Please call Kelly Gray at 503-725-2786 or email kellgray@pdx.edu.

Return the completed survey in the enclosed postage-paid envelope to:

PSU Survey Research Lab
1600 SW 4th Avenue Suite 400
Portland, OR 97201

So that we can understand the effect of wind power projects on the people living around them, we'd like to start by asking you a few questions about your home and community.

1. **What is your 5-digit zip code?** _____

2. **Do you own or rent your home?**

- Own
 Rent
 Other [please specify]: _____
 Don't Know

3. **In what year did you move into your current home? Your best estimate is fine.** (e.g., 19XX or 20XX)

_____ Don't Remember

4. **In what year did you move into the community in which you are currently living? Your best estimate is fine.** (e.g., 19XX or 20XX)

_____ Don't Remember

5. **Did you move into your home before construction started on the wind project closest to your home?**

- No Yes Don't Know

6. **Do you have a wind turbine or turbines on your property?**

- Yes No Don't Know Skip to #7

6a. **How many turbines?** _____ Don't Know

7. **To what extent do you agree or disagree with the following statements?**

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree | Don't Know |
|--|-------------------|----------|----------------------------|-------|----------------|-----------------------|
| I would regret having to move to another place | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| The community in which I live is part of my identity | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |

8. **In general, to what extent do you feel annoyed by the following in your community?**

| | Not at All | Slightly | Somewhat | Moderately | Very | Don't Know |
|--|------------|----------|----------|------------|------|-----------------------|
| Motor vehicle traffic, including cars and trucks | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| Street lights | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| Agricultural machinery | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| Lawnmowers, snow or leaf blowers | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |

9. **Overall, how sensitive to noise are you?**

- Not at All Slightly Somewhat Moderately Very Don't Know

The next section of the survey is about the wind project planning and development process. If you moved into your home before construction started on the wind project closest to your home (i.e., you answered "Yes" to #5), please continue to #10. If you answered "No" or "Don't Know" to #5, skip to #16.

10. When did the wind project become known to you?

- At the time of the first public announcement (e.g., at a meeting or in the paper)
 - Before the first public announcement had been made
 - After the first public announcement had been made
- (Continue to #11)
- When construction began
 - After the wind project began operation
 - Don't Know
- (Skip to #16)

11. In general, to what extent do you agree or disagree with the following statements?

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree | Don't Know |
|---|-------------------|----------|----------------------------|-------|----------------|-----------------------|
| I had a say in the planning process of the local wind project. | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| Community members had a say in the planning process of the local wind project. | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| The wind project developer acted openly and transparently throughout the process. | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| The community was able to influence the outcome of the wind project. For example, the location or number of turbines. | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |

12. To what extent do you believe the planning process was fair?

- Not at All
 Slightly
 Somewhat
 Moderately
 Very
 Don't Know

13. To what extent did you feel annoyed by the planning and construction process?

- Not at All
 Slightly
 Somewhat
 Moderately
 Very
 Don't Know

14. During the planning process for the wind project did you take any of the following actions?

[Select ALL that apply]

- Wrote a letter to the editor
 - Attended a meeting
 - Spoke out at a meeting
 - Contributed to a web page
 - Put up a sign
- (Answer #14a)
- None
 - Don't Know
- (Skip to #15)

14a. Were your actions supportive or opposed to the wind project? [Select only ONE]

- Supportive
- Opposed
- Both supportive and opposed
- Neither supportive nor opposed
- Don't Know

15. How much did the planning process change your opinion about the wind project? The planning process made your opinion...

- Much More Negative
 Somewhat More Negative
 The Same
 Somewhat More Positive
 Much More Positive
 Don't Know

The next set of questions is about your perceptions of, and experiences with, the local wind project.

16. What is your attitude toward the local wind project now?

- Very Negative
 Negative
 Neutral
 Positive
 Very Positive
 Don't Know

17. We would like to understand how, if at all, your attitude has changed. Regardless of your attitude now, what was your attitude toward the local wind project before it was constructed?

- Very Negative
- Negative
- Neutral
- Positive
- Very Positive
- N/A or No
Change in
Opinion
- Don't Know

18. Which of the following best describes how you feel about the wind project? [Select only ONE]

- Proudful
- Fearful
- Hopeful
- Helpless
- Angry
- None of the Above
- Don't Know

19. How many wind turbines can you see in whole or in part from any spot on your property?

(If 1 or more, continue to #19a)

Don't Know (Skip to #20)

19a. How many wind turbines can you see in whole or in part from inside your home?

(If 1 or more, continue to #19b)

Don't Know (Skip to #20)

19b. Of those wind turbines, how many can you see the entire sweep of the blades?

Don't Know

20. Do you like the way the wind project looks?

Yes

20a. Specifically, would you say it is...? [Select ALL that apply]

- Attractive
- Symbolizes progress toward clean energy
- A community landmark
- Fits well with the landscape of the local area
- None of the Above
- Don't Know

No

20b. Specifically, would you say it is...? [Select ALL that apply]

- Unattractive
- Industrial
- Disruptive to a community feel
- Does not fit landscape of the local area
- None of the Above
- Don't Know

Neutral,
No Opinion, or
Don't Know

(Continue to #21)

If you can see one or more wind turbines in whole or in part from any spot on your property (i.e., you answered "1" or more to #19), please answer question #21. If you answered "0" or "Don't Know" to #19, please skip to question #22.

21. Do the blades of a wind turbine ever cast a shadow on your property, but outside your home?

Yes

No

Don't Know

(Skip to #22)

21a. Do the blades of a wind turbine ever cast a shadow in your home?

- No
- Yes
- Don't Know

22. Have you ever heard sound from the wind project?

- Yes
 - No
 - Don't Know
- (Skip to #23)

22a. Can you hear sound from the wind project when you are on your property, but outside your home?

- Yes
 - No
 - Don't Know
- (Skip to #23)

22b. Can you hear sound from the wind project when you are in your home with the windows OPEN?

- Yes
 - No
 - Don't Know
- (Skip to #23)

22c. Can you hear sound from the wind project when you are in your home with the windows CLOSED?

- Yes
- No
- Don't Know

23. Since the time the wind project began to operate, have you filed any written complaints with local, county or state government officials? Written complaints could be letters, emails, texts, etc.

- Yes
 - No
 - Don't Know
- (Skip to #24)

23a. Have you filed a written complaint about any of the following?

| | No | Yes | Don't Know |
|---------------------------|-----------------------|-----------------------|-----------------------|
| Change to the landscape | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Wind turbine lighting | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Shadow flicker | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sound of the wind project | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

The next set of questions asks about any effects the local wind project has had on you. For these questions, think about the experiences you have had over the past year.

24. To what extent do you feel annoyed by each of the following effects of the local wind project?

| | Not at All | Slightly | Somewhat | Moderately | Very | Don't Know |
|------------------------------|------------|----------|----------|------------|------|-----------------------|
| a. Change to the landscape | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| b. Wind turbine lighting | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| c. Shadow flicker | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |
| d. Sound of the wind project | 1 | 2 | 3 | 4 | 5 | <input type="radio"/> |

If your answer to #24d (Sound of the wind project) was...

Slightly (2), Somewhat (3), Moderately (4), or Very (5)

Not at All (1) or Don't Know

Answer #25 & #26

Skip to #27

25. About how often have you felt annoyed by the sound you have heard from the wind project?

- Daily
- Weekly
- Monthly
- Less than once per month
- Don't Know

26. Which best describes the turbine sound that is the most annoying to you? [Select only ONE]

- Resounding, like a plane circling overhead
- Swishing or Whooshing, like a rhythmic sound
- Grinding, like metal against metal
- Bumping or Thumping, like shoes in a dryer
- None of the Above
- Don't Know

27. Have you ever experienced any negative effects from the wind project?

- Yes No Don't Know (Skip to #28)

27a. How have you coped with any negative effects of the wind project?

| | No | Yes | Don't Know |
|---|-----------------------|-----------------------|-----------------------|
| Tried to relax | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Talked with others | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ignored it | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Accepted it | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Reduced its effects (e.g., sound dampening, shutting windows, or closing blinds). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Avoided it | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

28. Have you experienced any physical or psychological health effects that you attribute to the wind project?

- Yes No Don't Know (Skip to #29)

28a. How often have you experienced each of the following:

| | Daily | Weekly | Monthly | Less than Once a Month | Not at All | Don't Know |
|---|-----------------------------|------------------------------|-------------------------------|--------------------------------------|----------------------------------|----------------------------------|
| Being in a bad mood | <input type="radio"/> Daily | <input type="radio"/> Weekly | <input type="radio"/> Monthly | <input type="radio"/> Less than 1/Mo | <input type="radio"/> Not at All | <input type="radio"/> Don't Know |
| Was the bad mood the result of: [Select ALL that apply] <input type="checkbox"/> Change to the landscape <input type="checkbox"/> Wind turbine lighting <input type="checkbox"/> Shadow flicker <input type="checkbox"/> Sound of the wind project <input type="checkbox"/> Something else [please specify]: _____ <input type="checkbox"/> Don't Know | | | | | (Skip to next health effect) | |
| Anger | <input type="radio"/> Daily | <input type="radio"/> Weekly | <input type="radio"/> Monthly | <input type="radio"/> Less than 1/Mo | <input type="radio"/> Not at All | <input type="radio"/> Don't Know |
| Was the anger the result of: [Select ALL that apply] <input type="checkbox"/> Change to the landscape <input type="checkbox"/> Wind turbine lighting <input type="checkbox"/> Shadow flicker <input type="checkbox"/> Sound of the wind project <input type="checkbox"/> Something else [please specify]: _____ <input type="checkbox"/> Don't Know | | | | | (Skip to next health effect) | |
| Lack of concentration | <input type="radio"/> Daily | <input type="radio"/> Weekly | <input type="radio"/> Monthly | <input type="radio"/> Less than 1/Mo | <input type="radio"/> Not at All | <input type="radio"/> Don't Know |
| Was the lack of concentration the result of: [Select ALL that apply] <input type="checkbox"/> Change to the landscape <input type="checkbox"/> Wind turbine lighting <input type="checkbox"/> Shadow flicker <input type="checkbox"/> Sound of the wind project <input type="checkbox"/> Something else [please specify]: _____ <input type="checkbox"/> Don't Know | | | | | (Skip to next health effect) | |
| Difficulty falling asleep | <input type="radio"/> Daily | <input type="radio"/> Weekly | <input type="radio"/> Monthly | <input type="radio"/> Less than 1/Mo | <input type="radio"/> Not at All | <input type="radio"/> Don't Know |
| Was the difficulty falling asleep the result of: [Select ALL that apply] <input type="checkbox"/> Change to the landscape <input type="checkbox"/> Wind turbine lighting <input type="checkbox"/> Shadow flicker <input type="checkbox"/> Sound of the wind project <input type="checkbox"/> Something else [please specify]: _____ <input type="checkbox"/> Don't Know | | | | | (Skip to next health effect) | |

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| How often have you experienced each of the following: | Daily | Weekly | Monthly | Less than Once a Month | Not at All | Don't Know |
|---|-----------------------------|------------------------------|-------------------------------|--------------------------------------|----------------------------------|----------------------------------|
| Otherwise not sleeping well | <input type="radio"/> Daily | <input type="radio"/> Weekly | <input type="radio"/> Monthly | <input type="radio"/> Less than 1/Mo | <input type="radio"/> Not at All | <input type="radio"/> Don't Know |
| Was the otherwise not sleeping well the result of: [Select ALL that apply] <input type="checkbox"/> Change to the landscape <input type="checkbox"/> Wind turbine lighting <input type="checkbox"/> Shadow flicker <input type="checkbox"/> Sound of the wind project <input type="checkbox"/> Something else [please specify]: _____ <input type="checkbox"/> Don't Know | | | | | (Skip to next health effect) | |
| Something else [please specify]: | <input type="radio"/> Daily | <input type="radio"/> Weekly | <input type="radio"/> Monthly | <input type="radio"/> Less than 1/Mo | <input type="radio"/> Not at All | <input type="radio"/> Don't Know |
| Was that the result of: [Select ALL that apply] <input type="checkbox"/> Change to the landscape <input type="checkbox"/> Wind turbine lighting <input type="checkbox"/> Shadow flicker <input type="checkbox"/> Sound of the wind project <input type="checkbox"/> Something else [please specify]: _____ <input type="checkbox"/> Don't Know | | | | | (Skip to #29) | |

29. During the past 4 weeks, how much have you been bothered by acute physical health or emotional problems, or stress NOT related to the wind project? Acute means lasting only a short time.

- Not at All
 Slightly
 Somewhat
 Moderately
 Very
 Don't Know

30. Overall, how much have you been bothered by chronic physical health or emotional problems or stress NOT related to the wind project? Chronic means lasting at least several months.

- Not at All
 Slightly
 Somewhat
 Moderately
 Very
 Don't Know

Now we're going to ask about your preferences for living near the wind project and other energy facilities. Please imagine those other facilities being the same distance from your home as the local wind project.

31. Would you rather live near the Wind Project or a Nuclear Power Plant?

- Wind Project
 Nuclear Power Plant
 No Preference
 Don't Know

32. Would you rather live near the Wind Project or a Coal Plant?

- Wind Project
 Coal Plant
 No Preference
 Don't Know

33. Would you rather live near the Wind Project or a Natural Gas Plant?

- Wind Project
 Natural Gas Plant
 No Preference
 Don't Know

34. Would you rather live near the Wind Project or a Commercial-Scale Solar Project?

- Wind Project
 Commercial-Scale Solar Project
 No Preference
 Don't Know

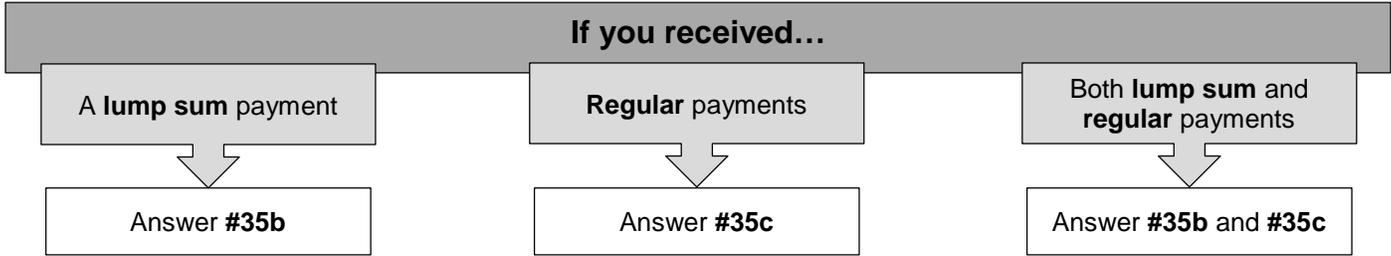
The next few questions ask about economic impacts of the local wind project.

35. Have you or your family received any money from the wind project?

- Yes (Continue to #35a)
 No
 Your contract does not permit you to say (Skip to #36)
 Don't Know

35a. Was it a lump sum payment, regular payments, or both?

- Lump Sum Payment
 Both
 Regular Payments
 Don't Know



35b. Was the lump sum payment...

- Less than \$5,000
- \$5,000 to \$9,999
- \$10,000 to \$50,000
- Greater than \$50,000
- Your Contract Does Not Permit You to Say
- Don't Know

35c. Is the annual total of regular payments...

- Less than \$1,000
- \$1,000 to \$4,999
- \$5,000 to \$9,999
- \$10,000 to \$25,000
- Greater than \$25,000
- Your Contract Does Not Permit You to Say
- Don't Know

36. Regardless of how compensation was handled in your case, which of the following would you MOST prefer?

- Individual-level compensation (i.e., lump sum, annual or monthly payments)
- Community-level compensation (i.e., open space, schools, buildings, or wildlife enhancement)
- Compensation is not appropriate
- Don't Know

37. If you own your home, do you believe the wind project has affected the value of your property?

- Yes
 - No
 - Don't Know
- (Skip to #38)

37a. Has it increased or decreased the value?

- Increased
- Decreased
- Don't Know

The next three questions ask your general opinions about energy development and climate change.

38. In general, the development of wind projects in the U.S. should be:

- [Select only ONE]
- Encouraged and promoted
 - Allowed in appropriate circumstances
 - Prohibited
 - Not Sure

39. How concerned are you about climate change?

- Very Concerned
- Concerned
- Somewhat Concerned
- Slightly Concerned
- Not Concerned
- Not Sure

40. Do you consider wind energy to be an effective means to reduce climate change?

- No
- Yes
- Don't Know

This final set of questions is for demographic purposes only so we can describe the group of people who responded to the survey. As a reminder, all of your answers are kept completely confidential.

41. What is your gender?

- Male
- Female
- Other [please specify]: _____

42. What is your age? _____

