

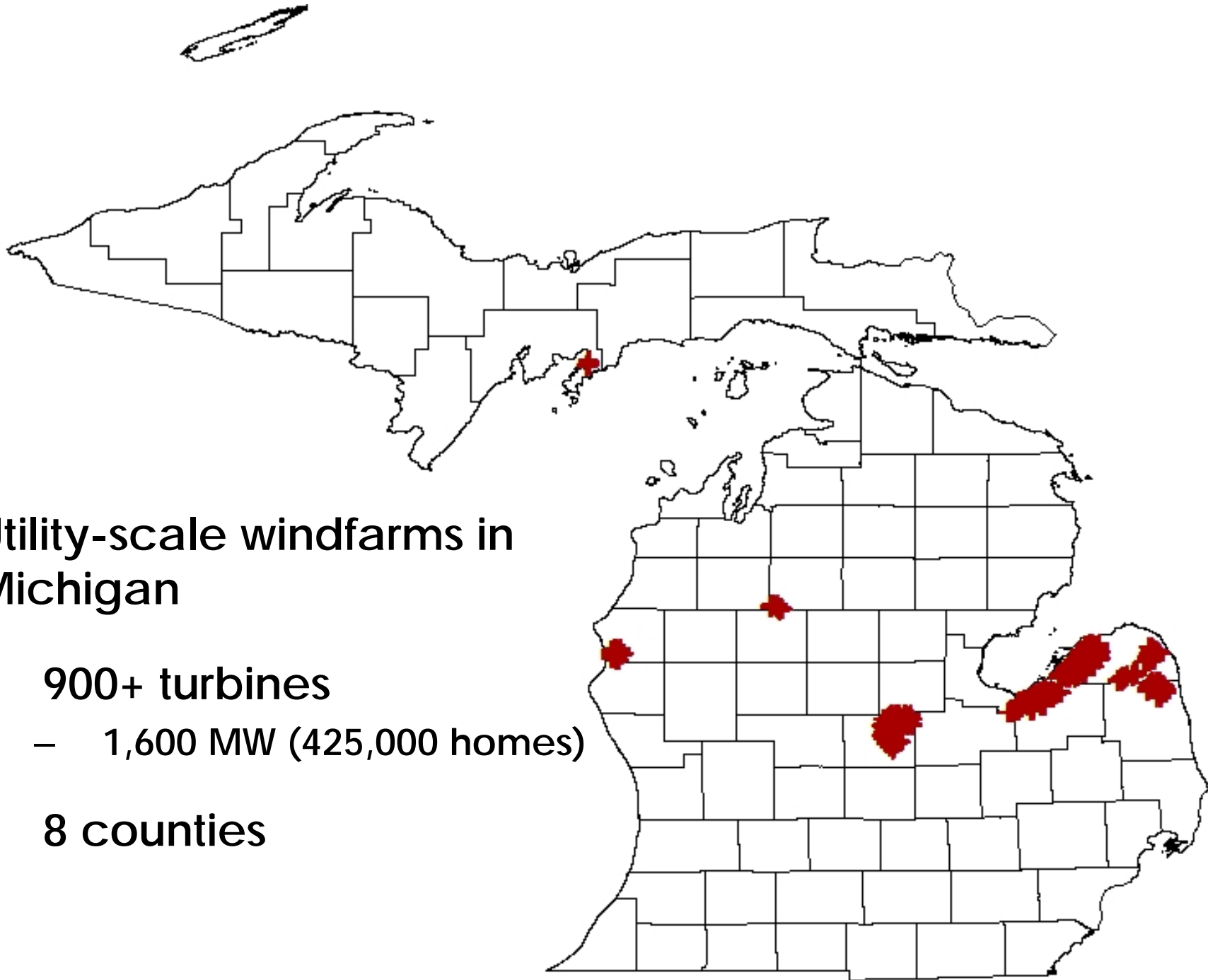
# Is Wind Energy Right for your Township?

MTA Annual Conference  
April 11, 2017

Sarah Mills, PhD

# What I'll cover

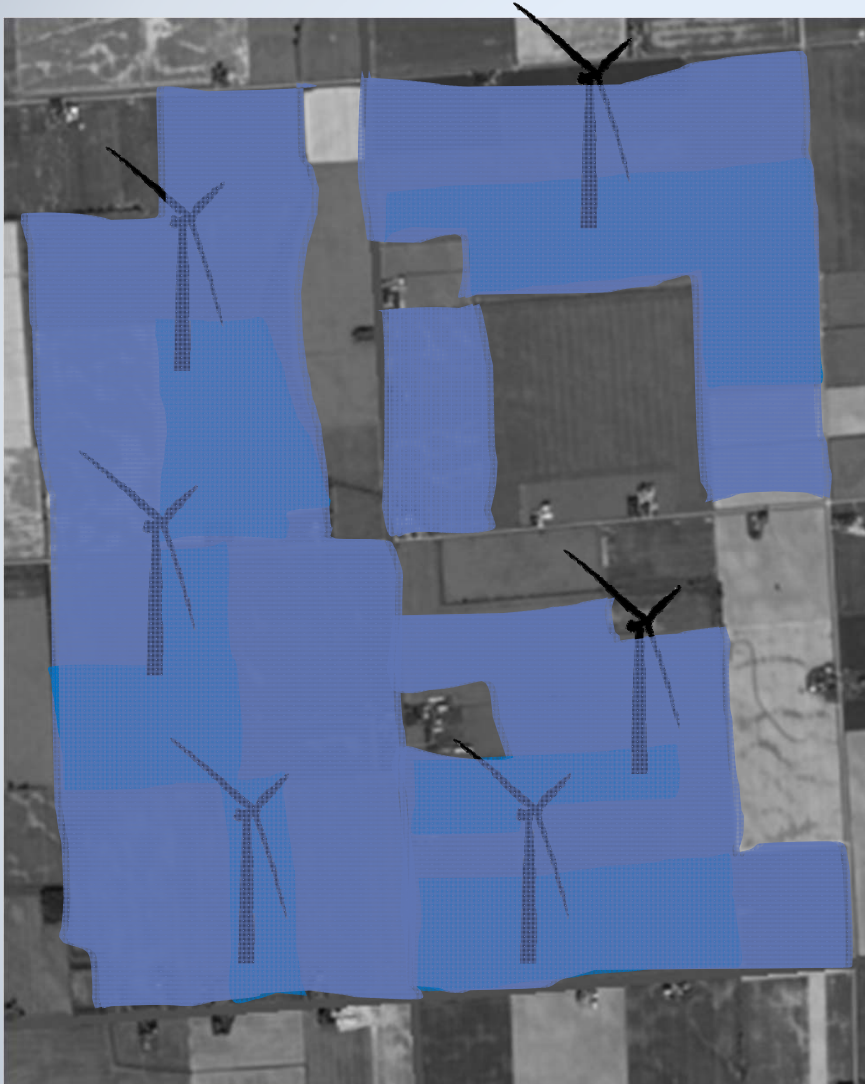
- Overview of wind development
- Surveys of landowners
  - Individual impacts
  - Community impacts
- What should you consider?



## Utility-scale windfarms in Michigan

- 900+ turbines
  - 1,600 MW (425,000 homes)
- 8 counties

# Wind Development 101

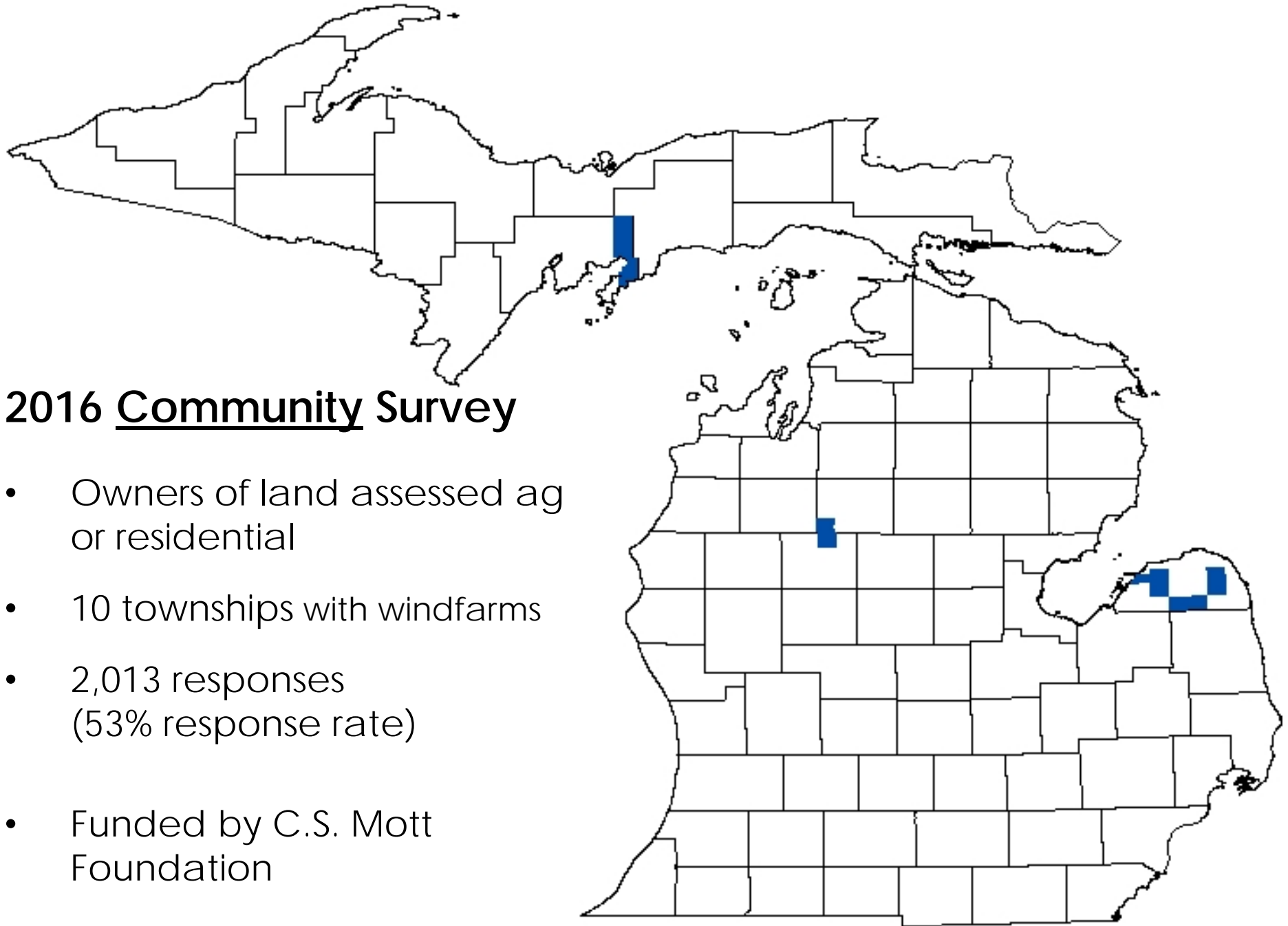


- Zoning constraints
- Landowner payments
  - Disturbance
  - Royalty
  - Participation/friendly neighbor
- Property tax payments
  - ~\$20M per year statewide

# Survey Data

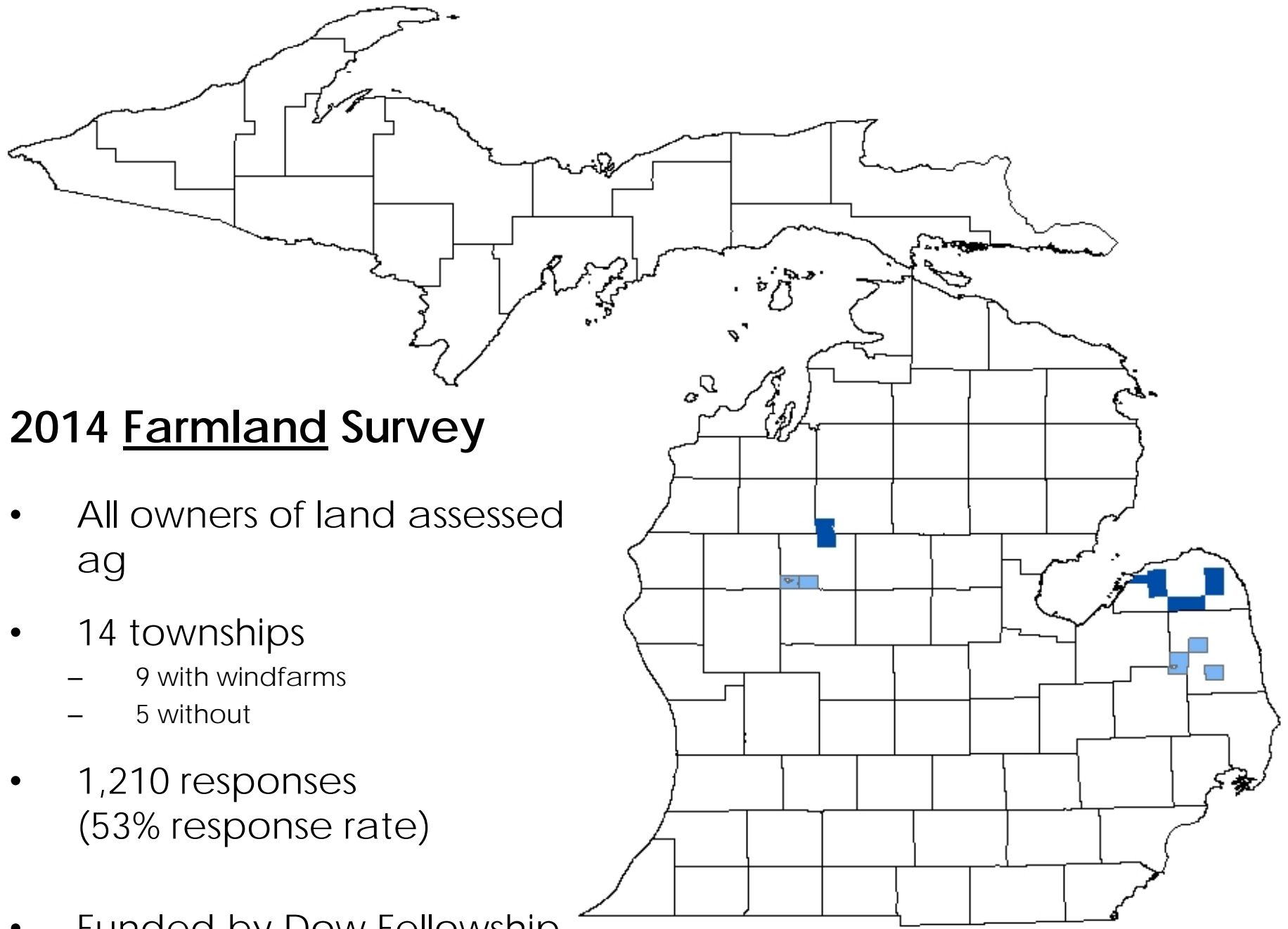
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When, who, and where  
& what did I find?



## 2016 Community Survey

- Owners of land assessed ag or residential
- 10 townships with windfarms
- 2,013 responses (53% response rate)
- Funded by C.S. Mott Foundation



## 2014 Farmland Survey

- All owners of land assessed ag
- 14 townships
  - 9 with windfarms
  - 5 without
- 1,210 responses  
(53% response rate)
- Funded by Dow Fellowship

# Things to keep in mind

- Not all respondents live in township
  - Even if they do, some live far from turbines
- Results not weighted; more populous townships more represented
- Margin of error:  $\pm 1.5\%$



# Overall drivers of attitudes

- Being within earshot of turbines
- Type of land owned
  - secondary vs. primary residence
  - farmland /rental property *only*
- Direct compensation
  - Some better than none
  - \$1,000 per year as key threshold

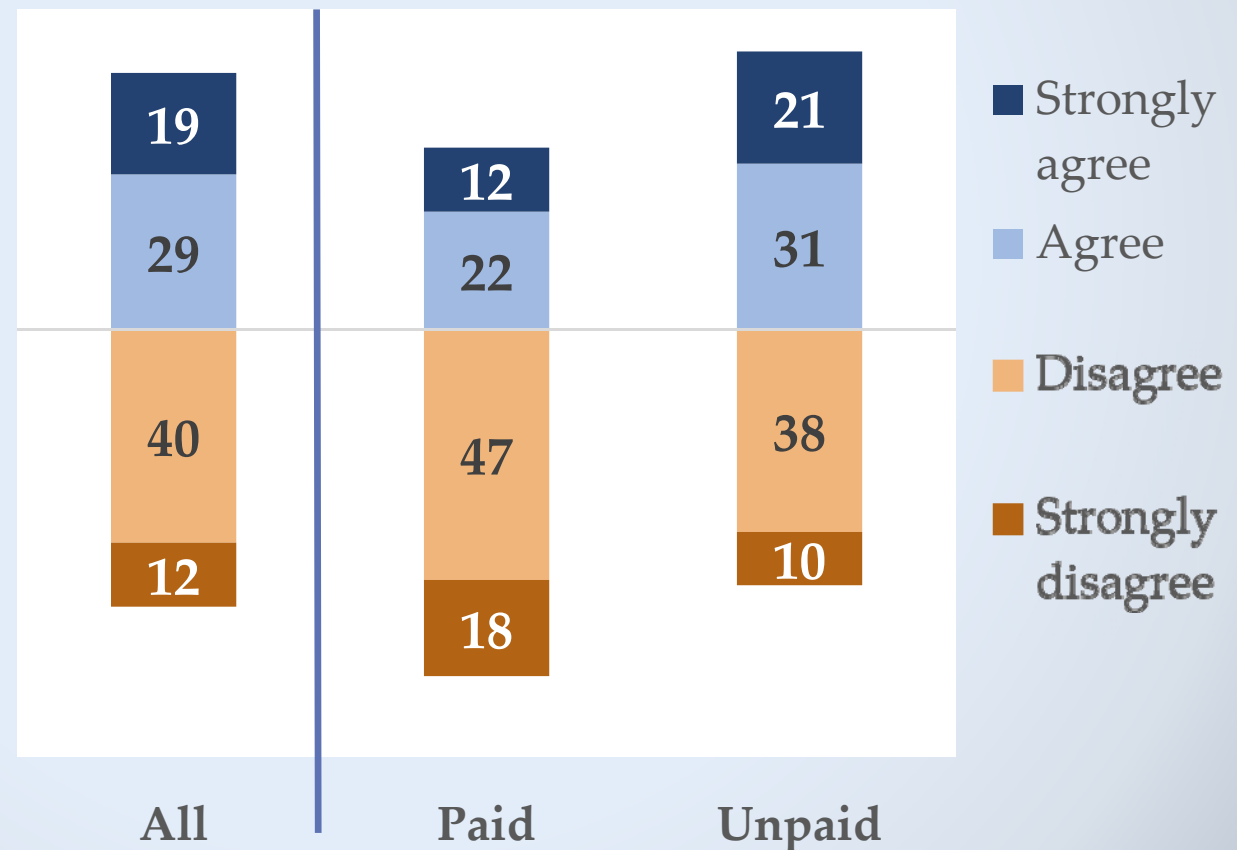
# Individual-level Impacts

- Noise
- Visual
- Health
- Property value
- Farm income
- Farm succession

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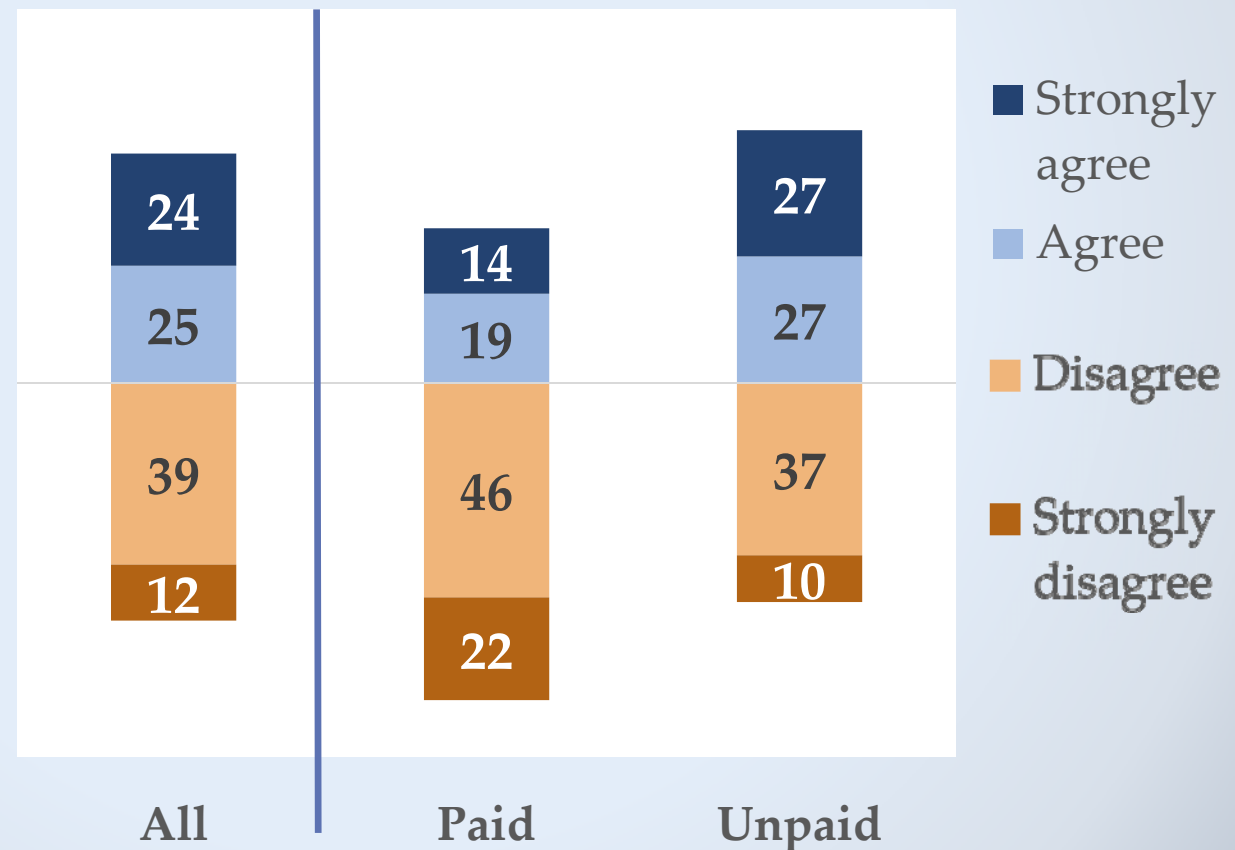
Turbines create noise pollution



# Individual-level Impacts

- Noise
- **Visual**
- Health
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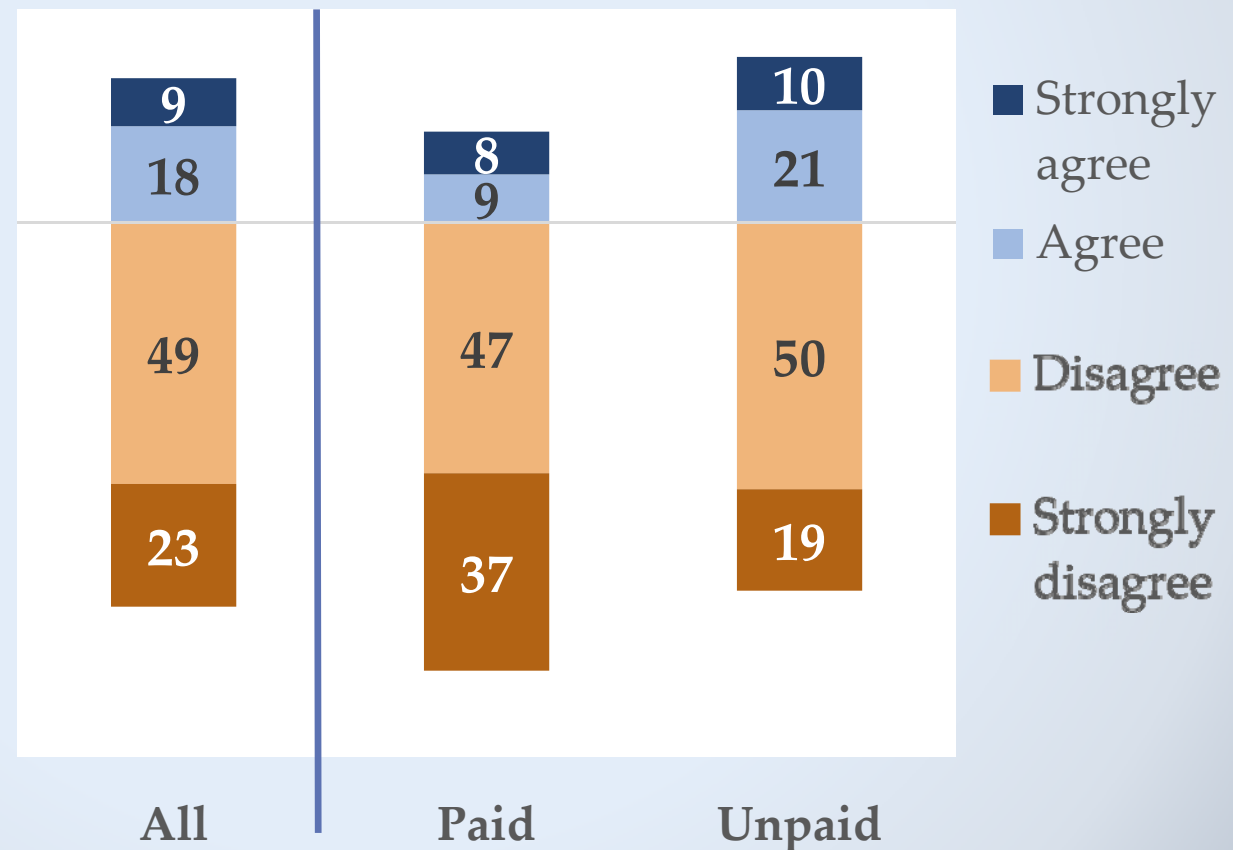
Turbines create visual/aesthetic problems



# Individual-level Impacts

- Noise
- Visual
- **Health**
- Property value
- Farm income
- Farm succession

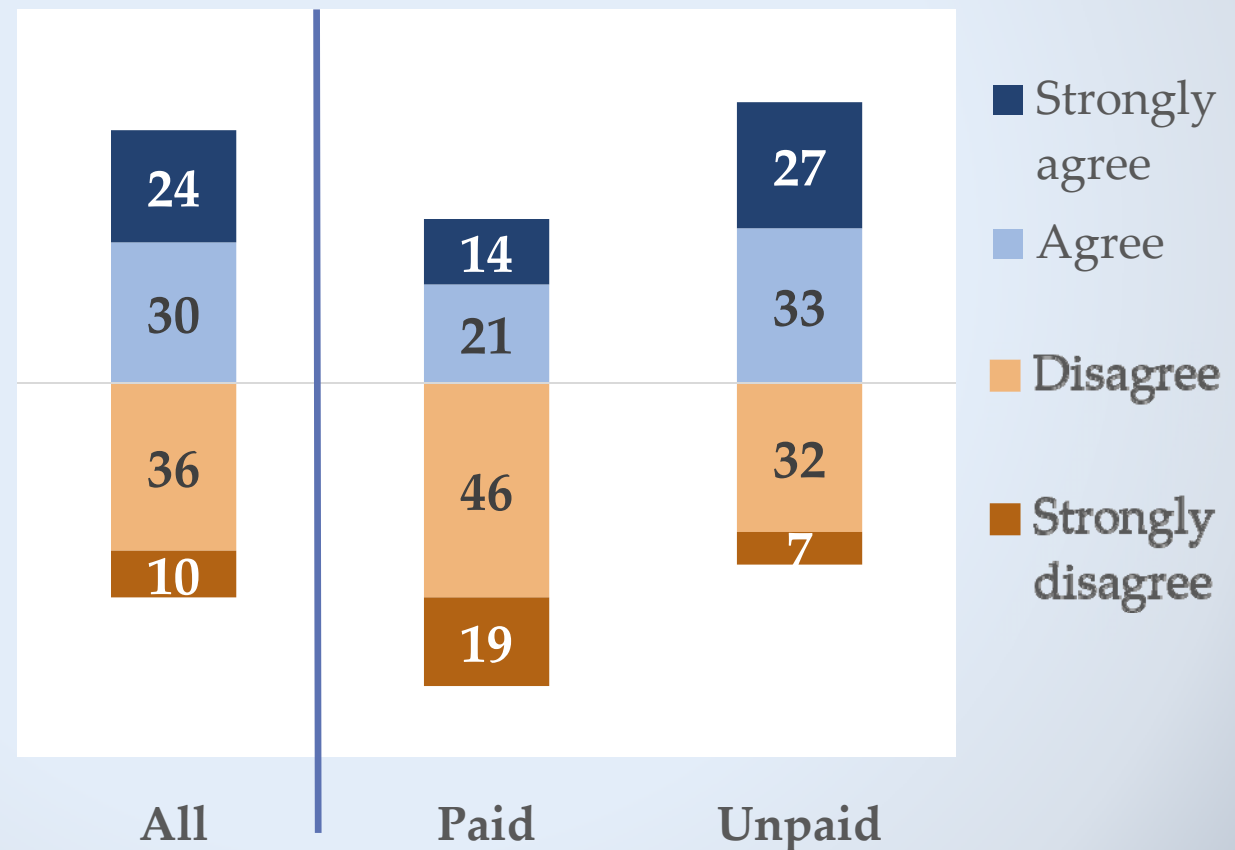
Turbines cause human health problems



# Individual-level Impacts

- Noise
- Visual
- Health
- **Property value**
- Farm income
- Farm succession

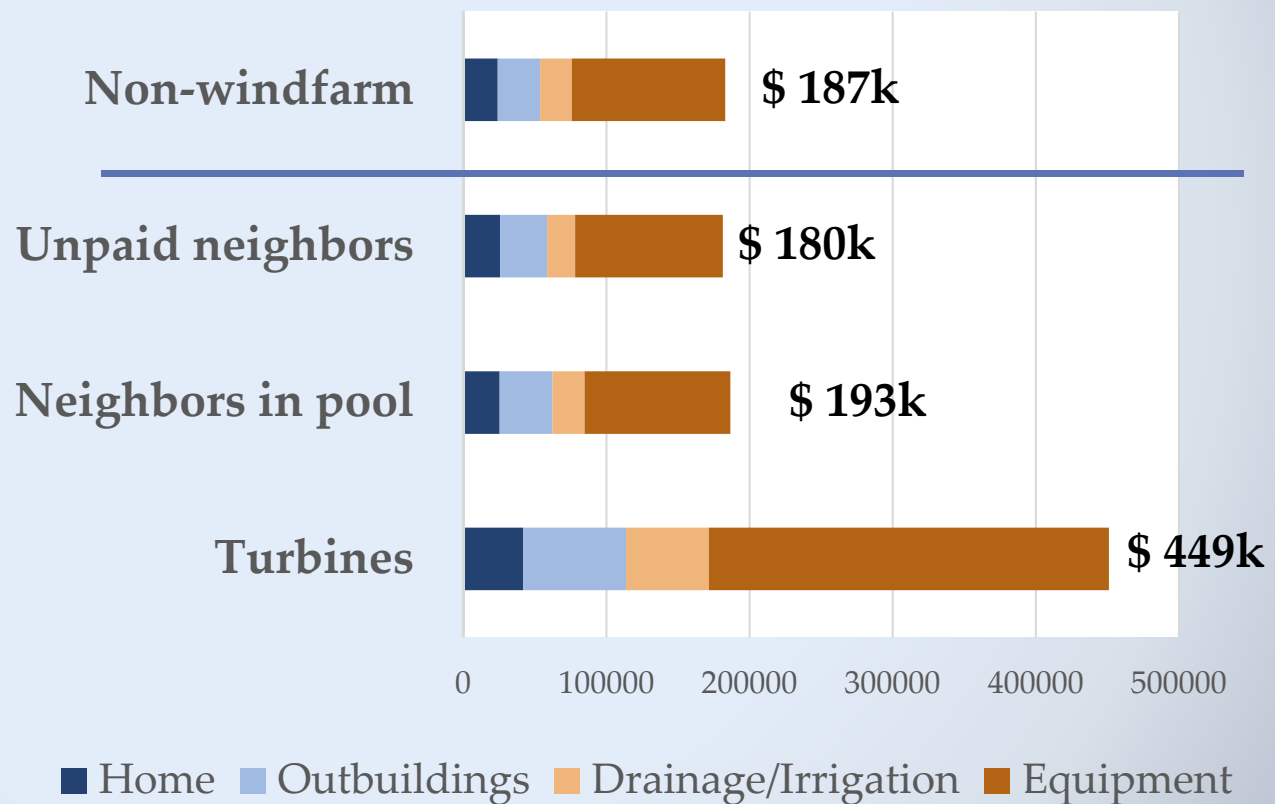
Turbines decrease nearby property values



# Individual-level Impacts

Investments over 5 years: 2009-2013

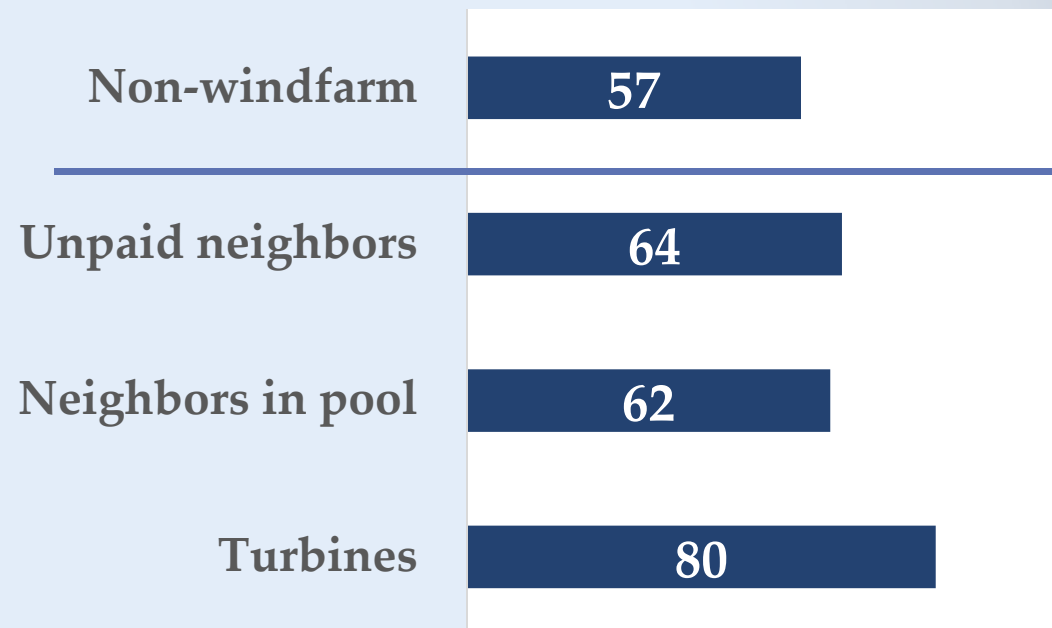
- Noise
- Visual
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- **Farm income**
- Farm succession



# Individual-level Impacts

- Noise
- Visual
- Health
- Property value
- Farm income
- Farm succession

% that have farm succession plan





# Individual-level Impacts

## Take-aways

- Views on noise, visual impact, property values roughly 50/50  
Financial stake = rosier view  
OR  
no financial stake = more soured view
- Most don't see health impacts
- Having turbine on property results in additional on-farm investment, succession planning

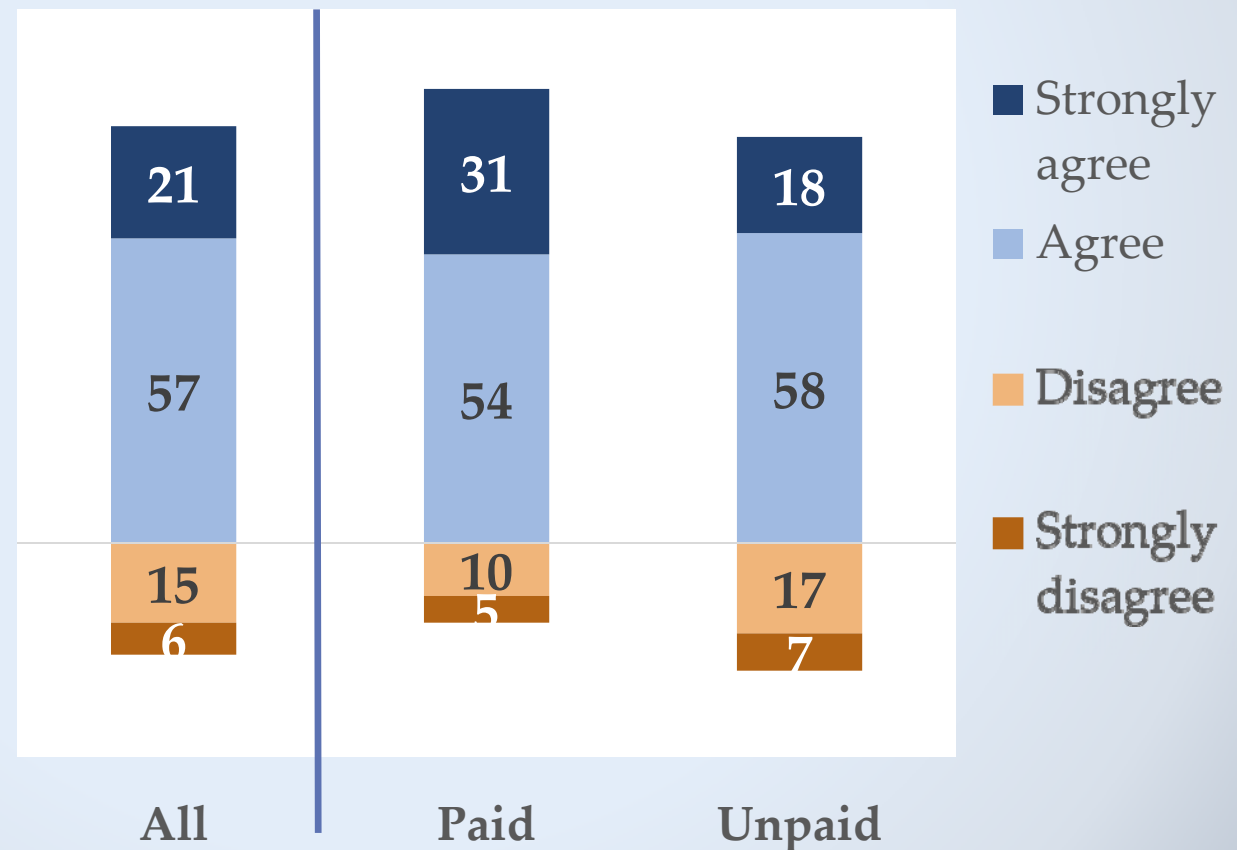
# Community-level Impacts

- Job creation
- Roads
- Township services
- County services
- Schools
- Relationships with neighbors

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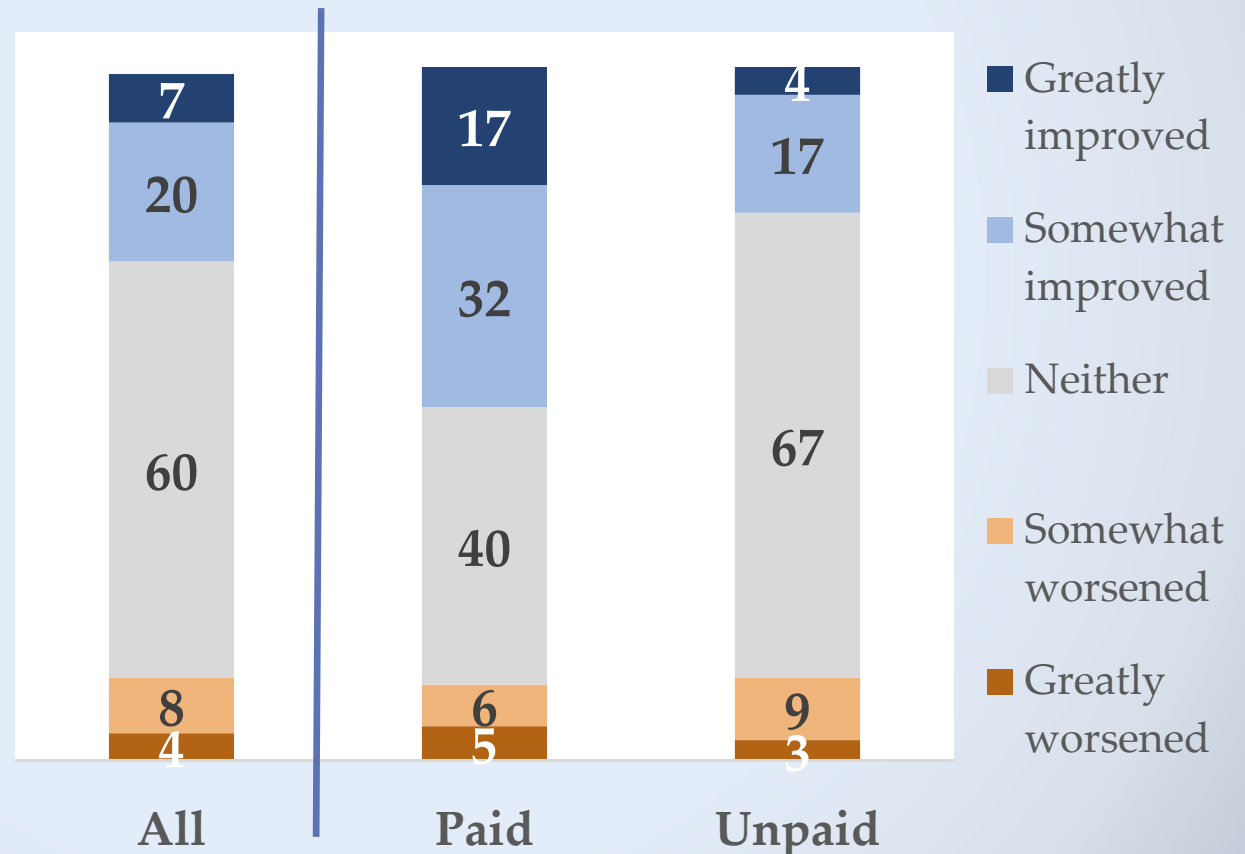
Turbines create jobs



# Community-level Impacts

- Job creation
- **Roads**
- Township services
- County services
- Schools
- Relationships with neighbors

Turbines' effect on local roads

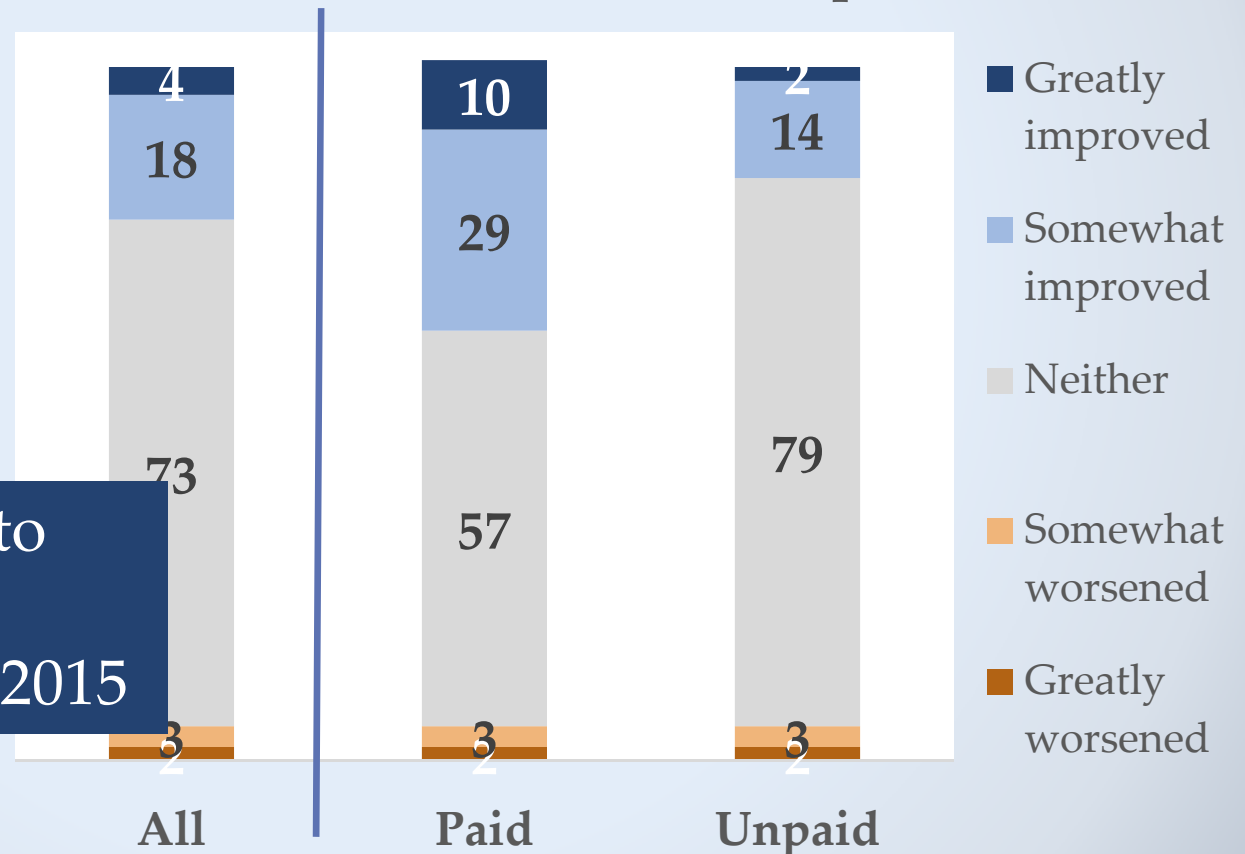


# Community-level Impacts

Turbines' effect on township services

- Job creation
- Roads
- Township services
- County services

**\$2.630 Million to townships in Huron County in 2015**

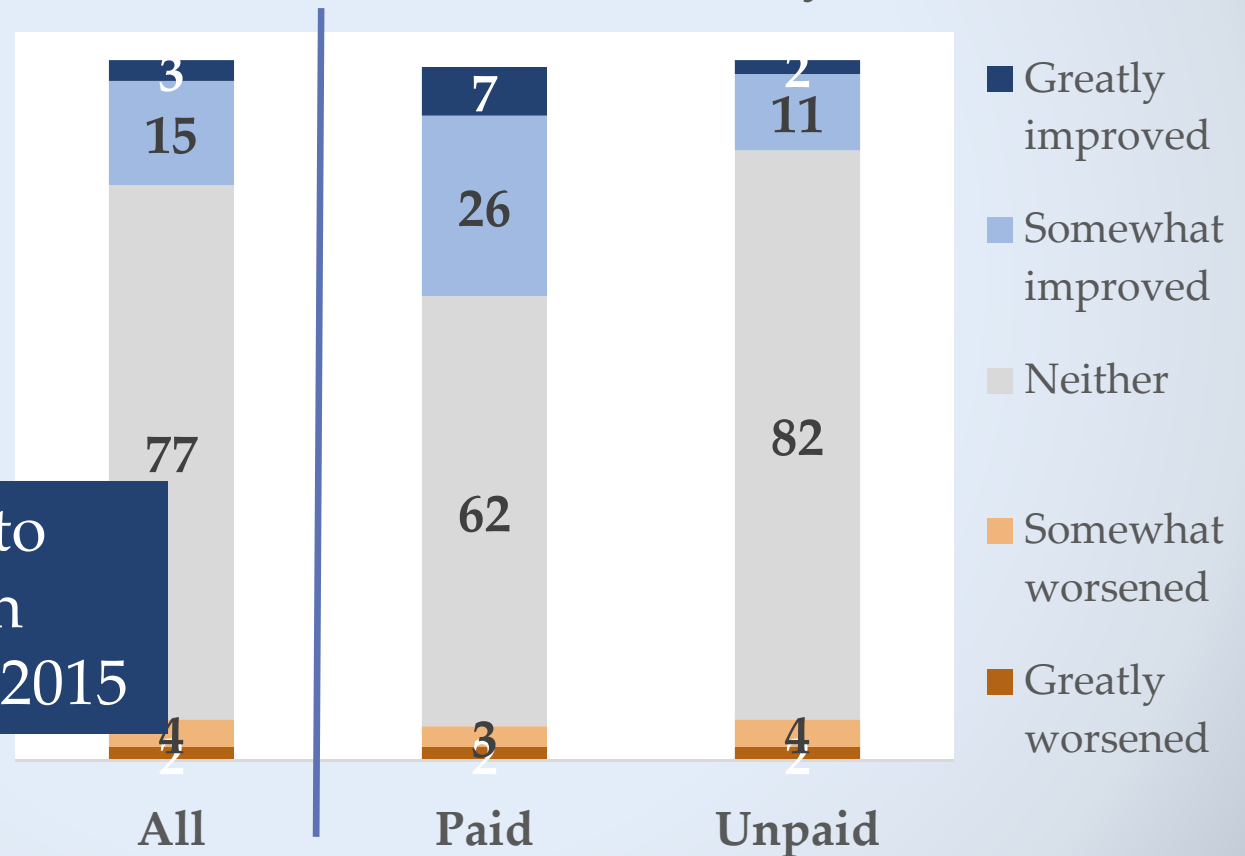


# Community-level Impacts

Turbines' effect on county services

- Job creation
- Roads
- Township services
- **County services**

**\$2.749 Million to county gov't in Huron County in 2015**

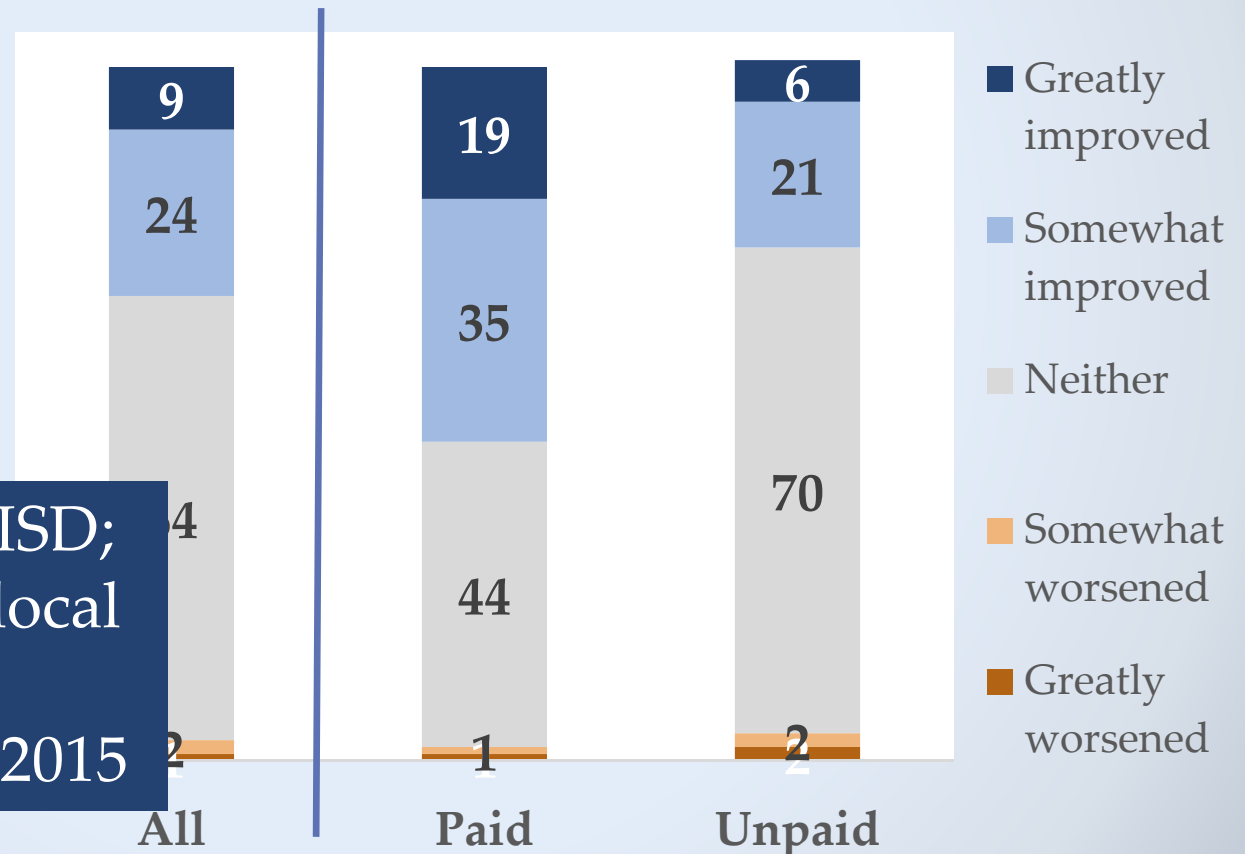


# Community-level Impacts

- Job creation
- Roads
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- County services

**\$2.083 Million to ISD;  
\$2.074 Million to local  
schools in  
Huron County in 2015**

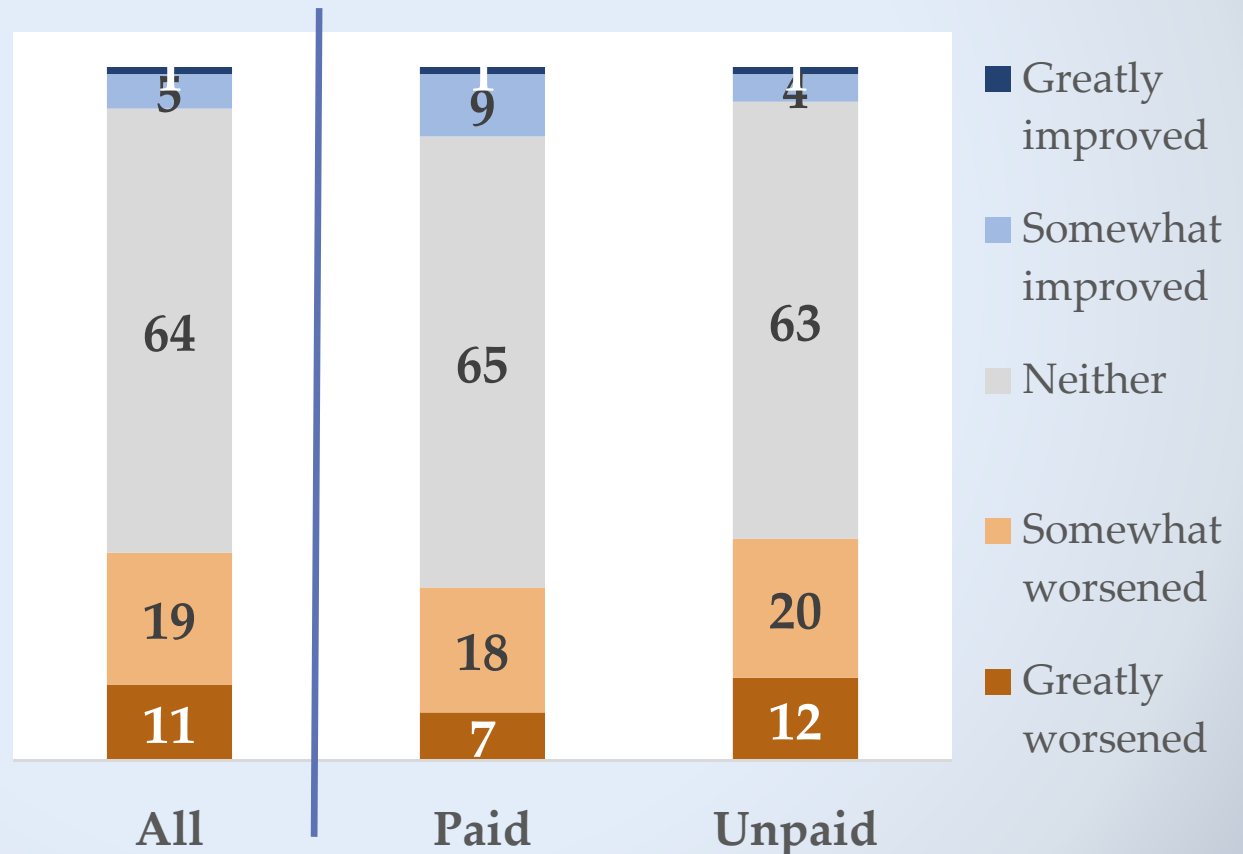
Turbines' effect on local schools



# Community-level Impacts

Turbines' effect on relationships with neighbors

- Job creation
- Roads
- Township services
- County services
- Schools
- Relationships with neighbors





# Community-level Impacts Take-aways

- Most see job creation (with caveat about types of jobs)
- Majority haven't seen changes to community services, schools, or relationships with neighbors
  - Tax uncertainty
  - Increasing cost of services may limit visible impacts

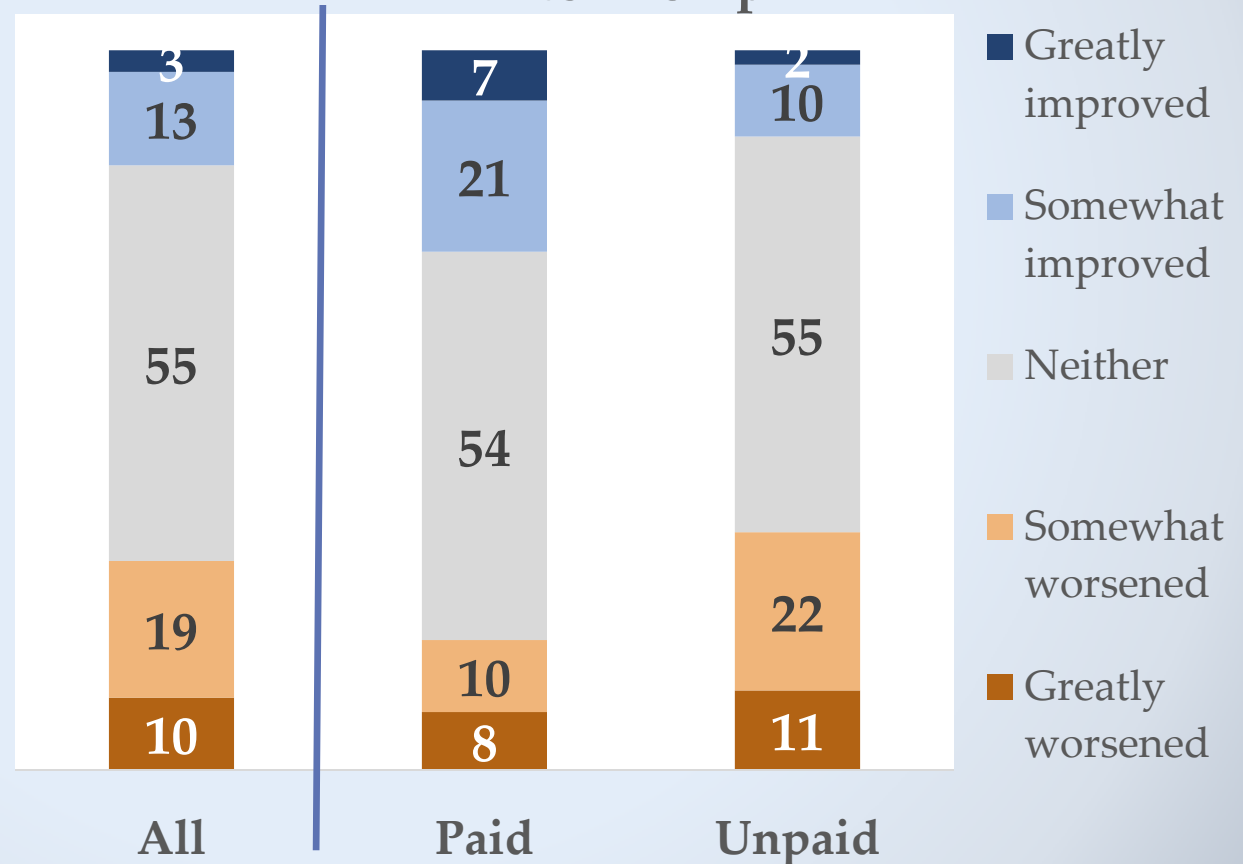
# Would they welcome wind development again?

- Quality of life
- Willingness to accept new turbines

# Would they welcome wind development again?

Turbines' effect on overall quality of life in township

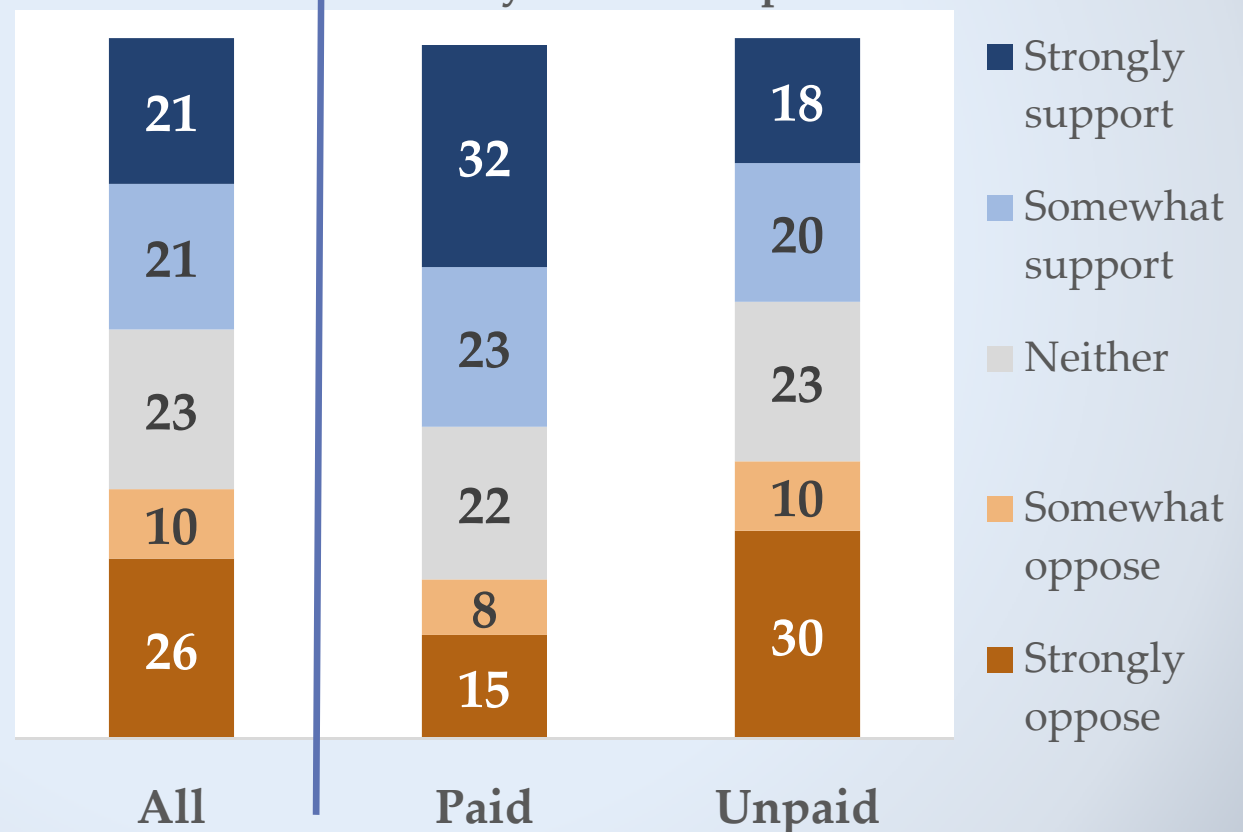
- Quality of life
- Willingness to accept new turbines



# Would they welcome wind development again?

Willingness to host additional turbines in your township

- Quality of life
- Willingness to accept new turbines



# What should you consider?

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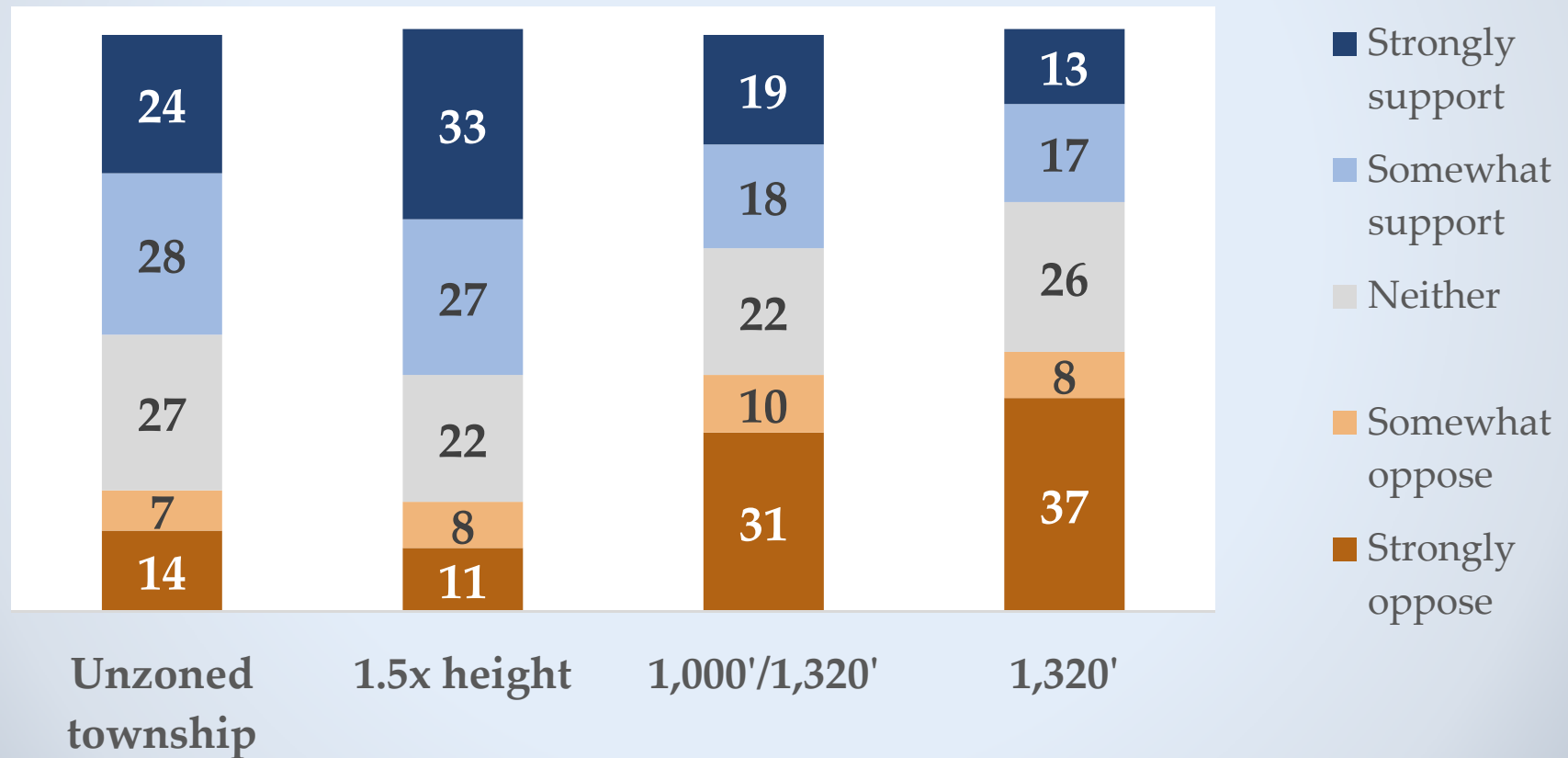
How to reap the benefits without the heartburn

# How does this fit with your long-term plan?

- If goal is for substantial residential development or growth of tourism, wind may not be right
- If goal is to sustain agriculture, wind can fit

# The ideal zoning ordinance?

Support/oppose additional turbines in township,  
by zoning setback distance



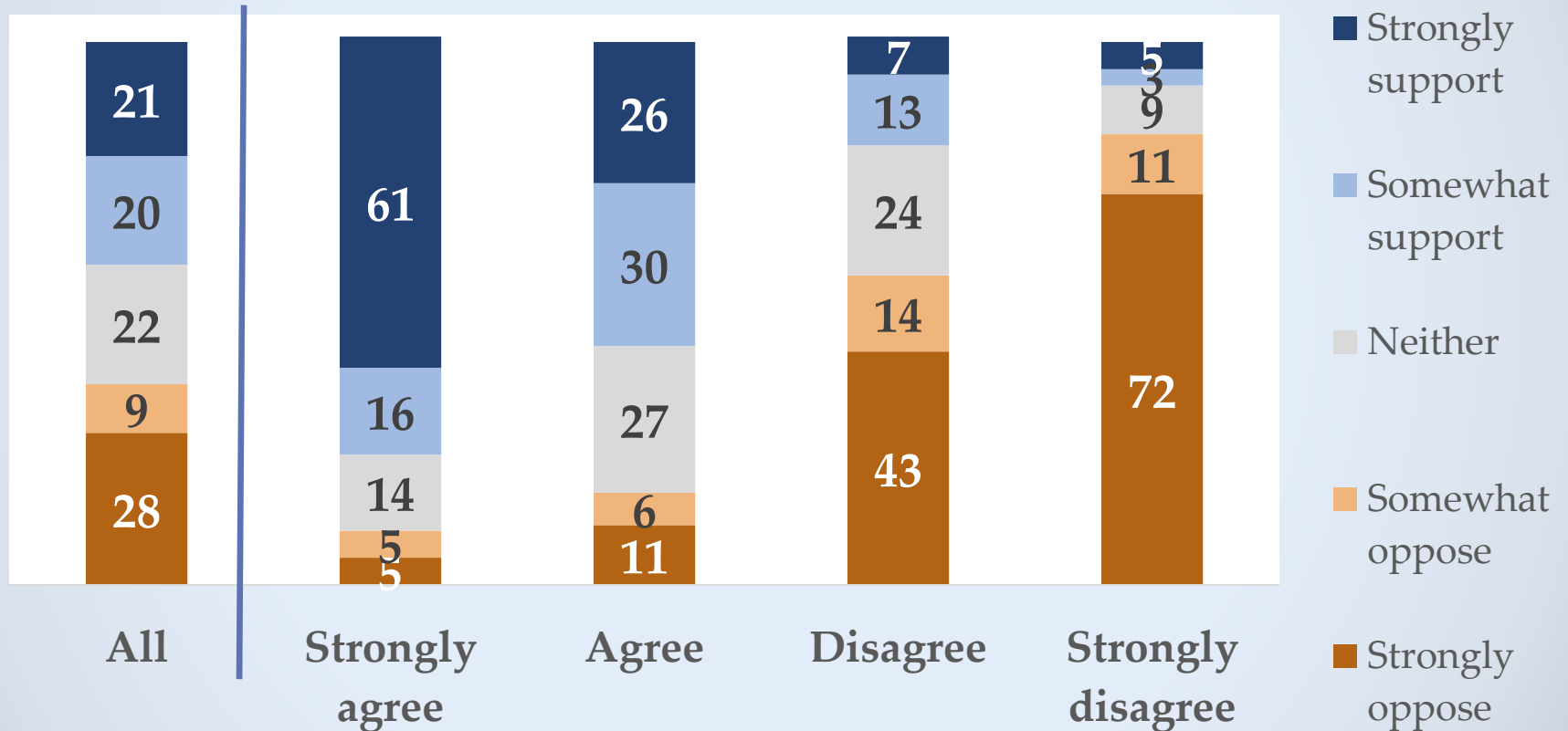
# Zoning ordinance considerations

- Setback distance
  - Participating vs. non-participating landowners
- Noise limit and enforcement
- Flicker analysis
- Decommission plan/financial assurance



# The importance of transparency

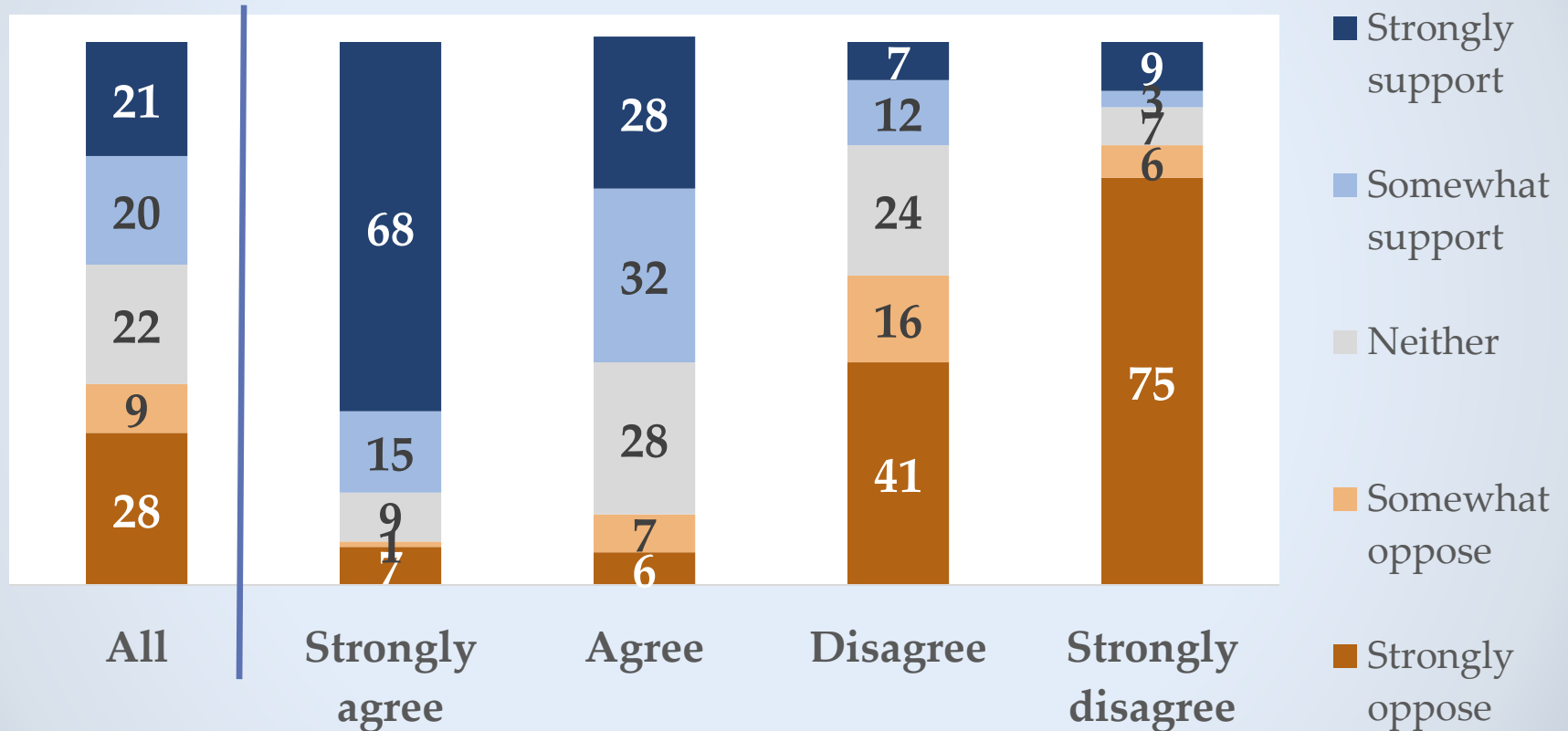
Support/oppose additional turbines in township,  
by agree/disagree wind developer acted transparently



“The wind project developer acted openly and transparently throughout the planning process.”

# The importance of transparency

Support/oppose additional turbines in township,  
by agree/disagree local officials acted in best interest



“Local government officials’ decisions about the wind project were in the best interests of our township.”

# Be ready to answer questions

- About who benefits / amount of tax revenue
- About decommissioning

# Invite me to your township

- Grant from C.S. Mott Foundation covers my expenses—all you need to do is invite me
- Aim: to provide evidence-based account of experiences across the state
- I can give a presentation, or just answer questions



Gerald R. Ford  
School of Public Policy



# The CLOSUP Wind Project

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