

# Research from Michigan's Windfarms

Shiawassee County Planning Commission  
August 23, 2017

Sarah Mills, PhD

# Why am I here?

- Grant from C.S. Mott Foundation
- Helping take lessons-learned from Michigan windfarms to ensure wind development **respects local community values**
- To provide data-based account of opinions
  - Not relying on newspaper accounts
  - Give voice to the quiet folks

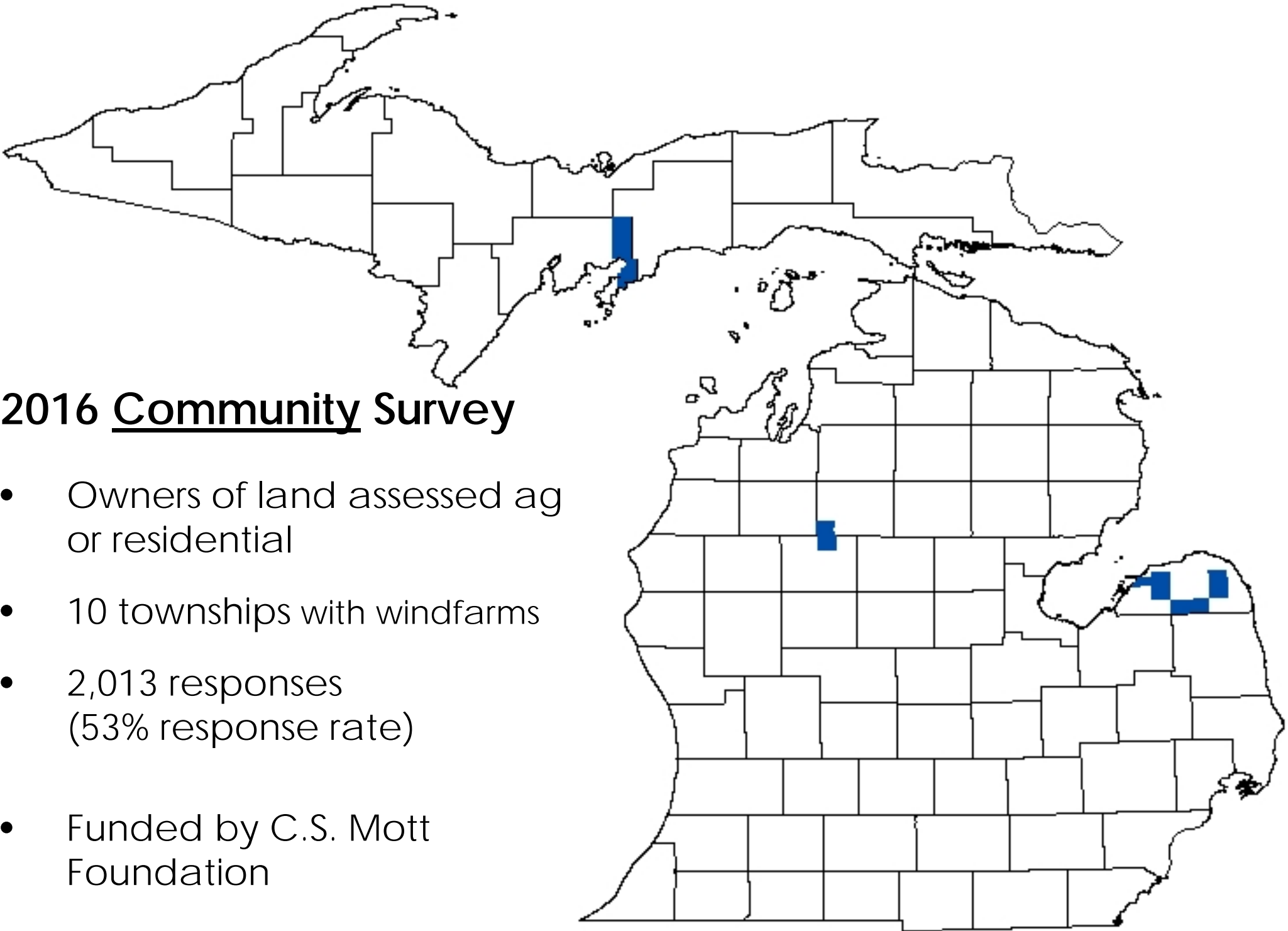
# What I'll cover

- Surveys of landowners
  - Who was surveyed?
  - Individual impacts
  - Community impacts
- General recommendations

# Survey Data

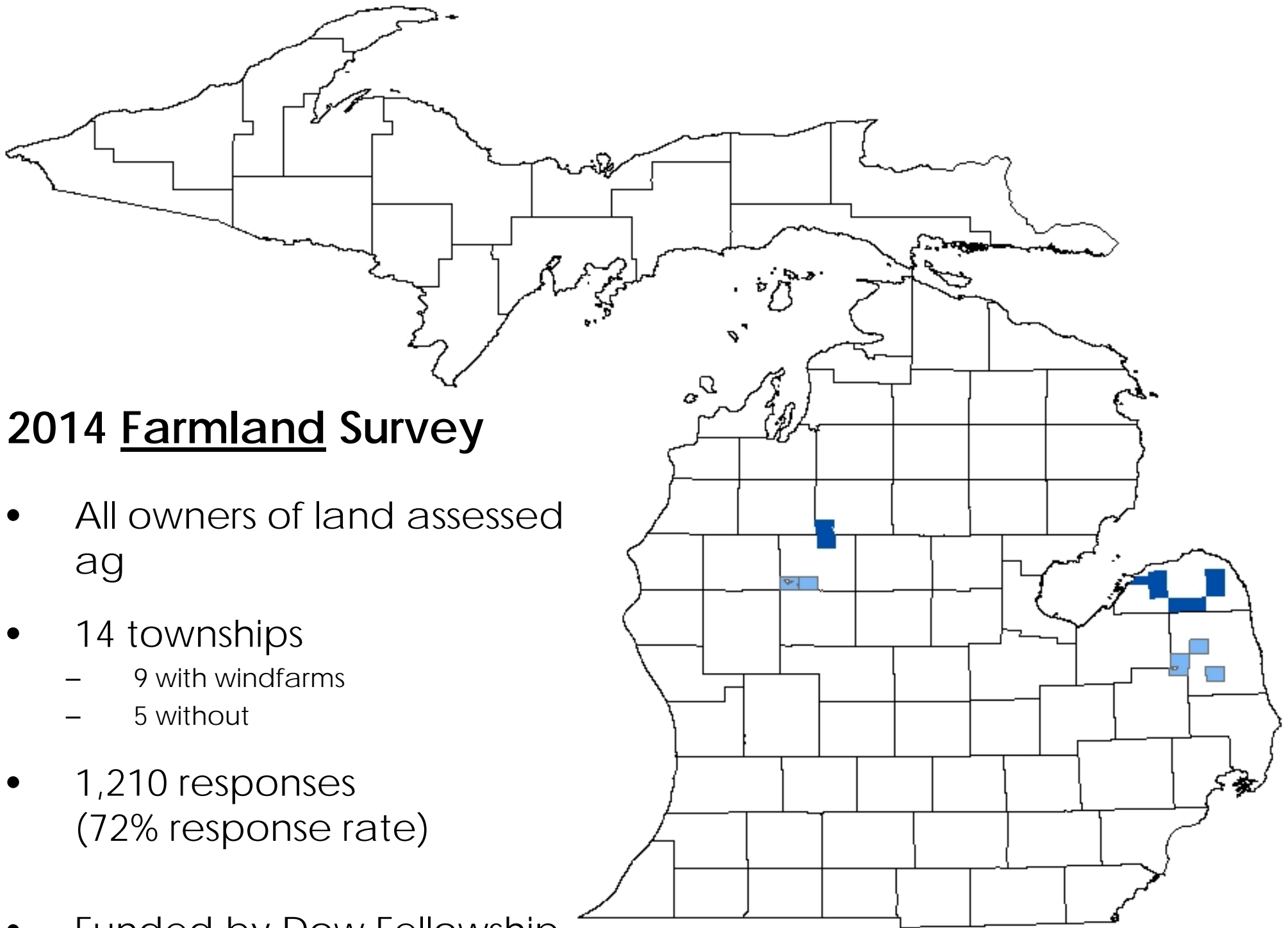
...

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  
(72% response rate)
- Funded by Dow Fellowship

# Overall drivers of attitudes

- Direct compensation
- Type of land owned
- Being within earshot of turbines
- Attitudes about process, wind developer

# Individual-level Impacts

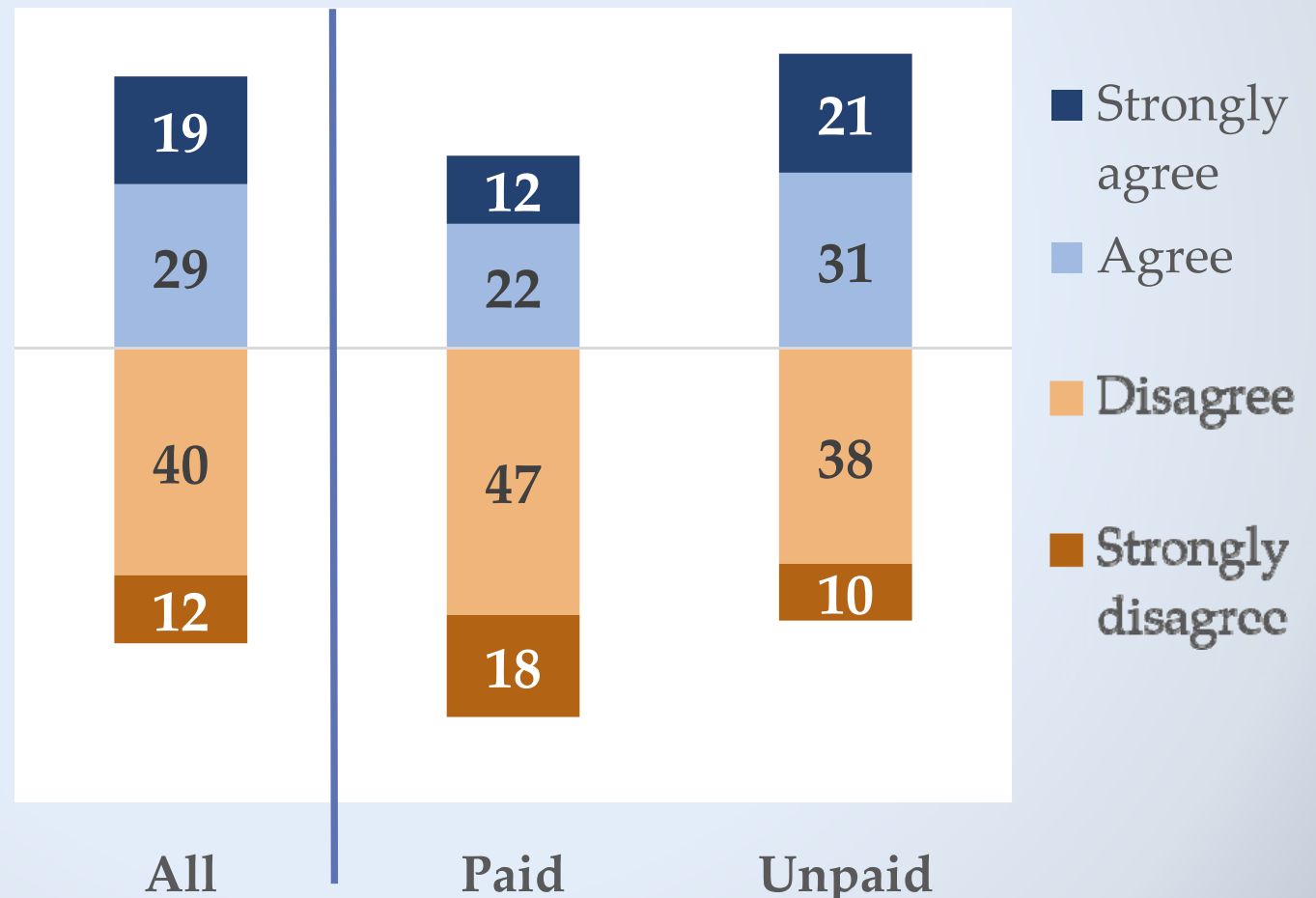
- Noise
- Visual
- Health
- Property value
- Farm income
- Farm succession



# Individual-level Impacts

- Noise
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- Health
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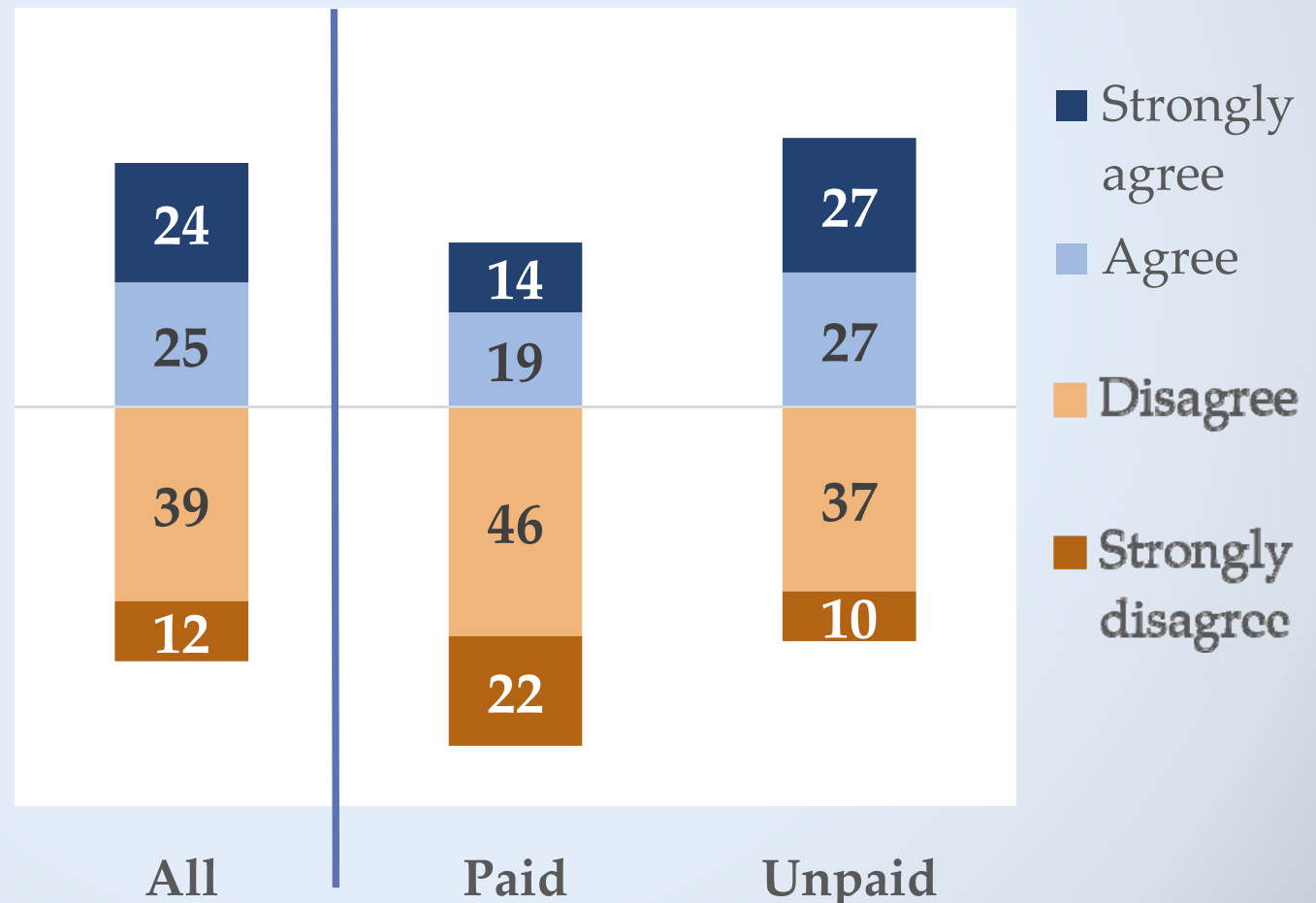
Turbines create noise pollution



# Individual-level Impacts

## Turbines create visual/aesthetic problems

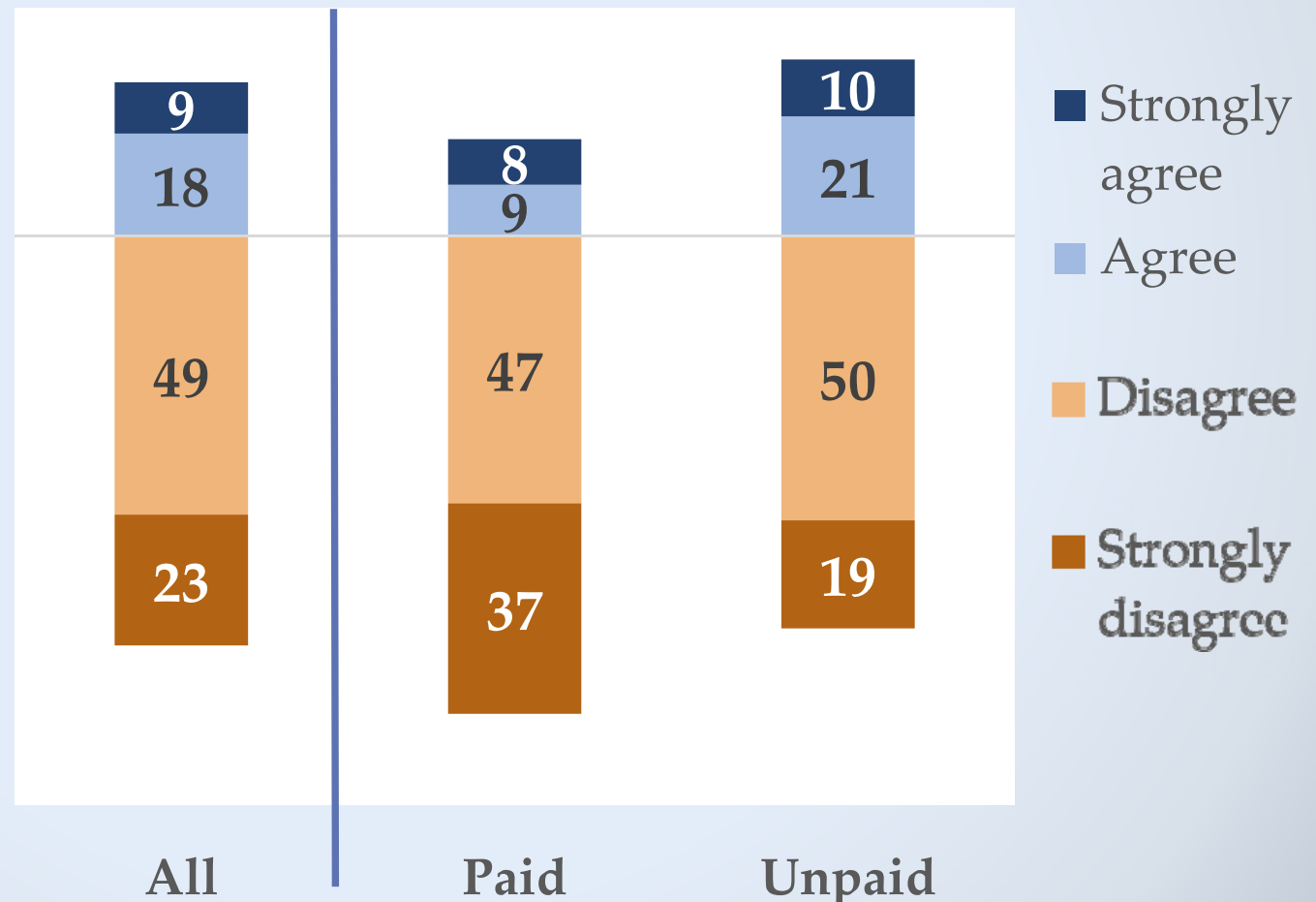
- Noise
- **Visual**
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# Individual-level Impacts

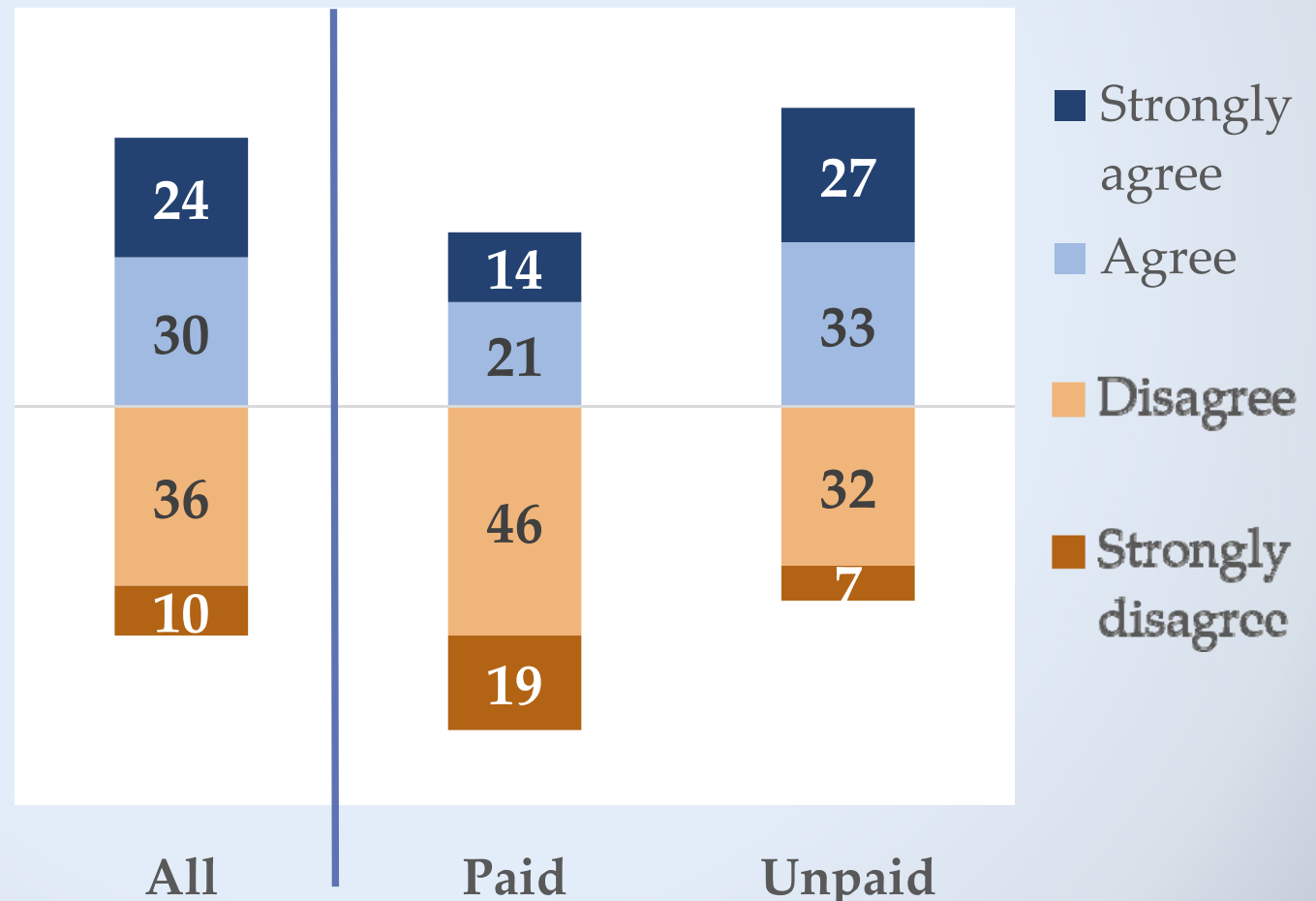
## Turbines cause human health problems

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



# Individual-level Impacts

Turbines decrease nearby property values

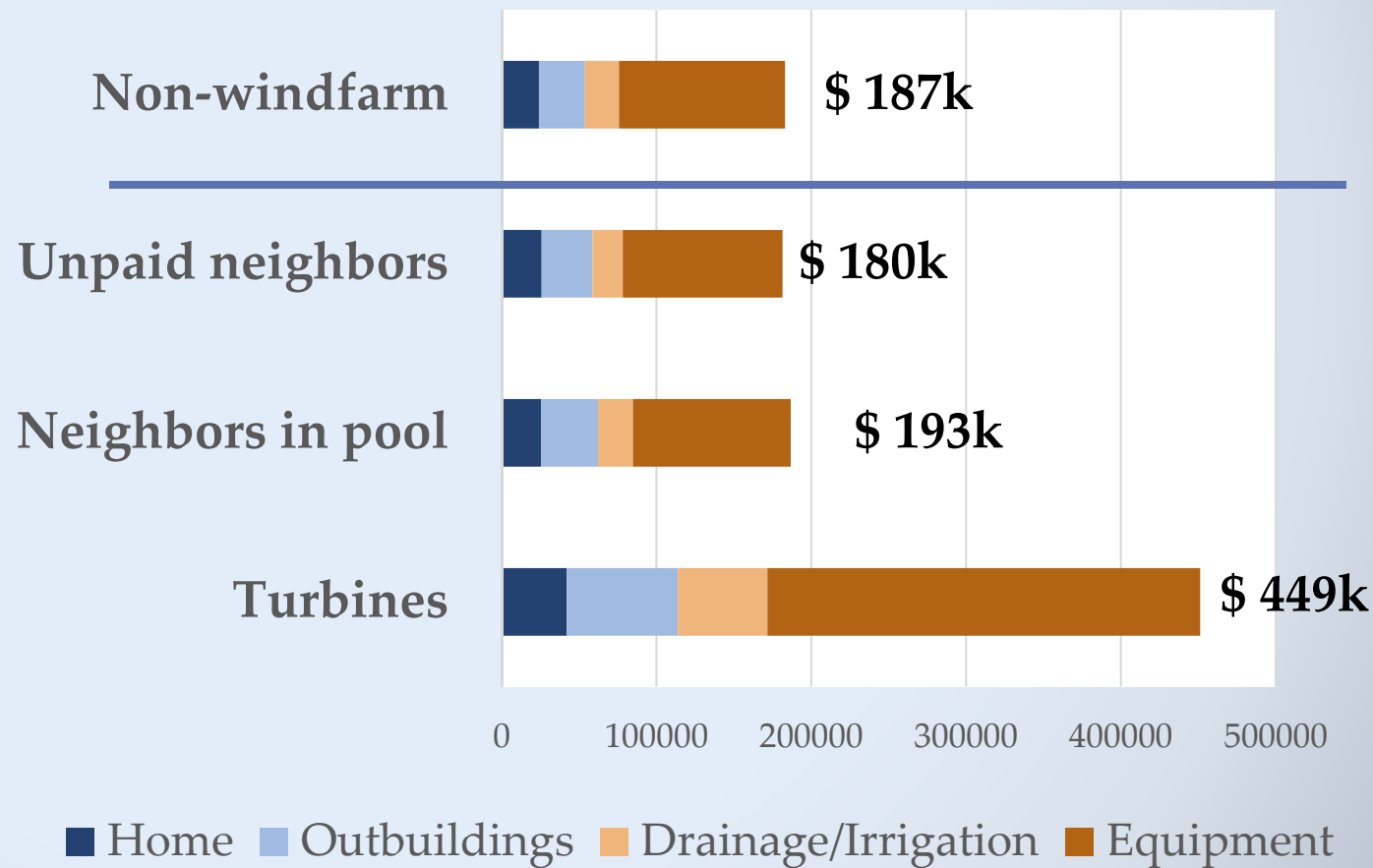


- Noise
- Visual
- Health
- **Property value**
- Farm income
- Farm succession

# Individual-level Impacts

## Investments over 5 years: 2009-2013

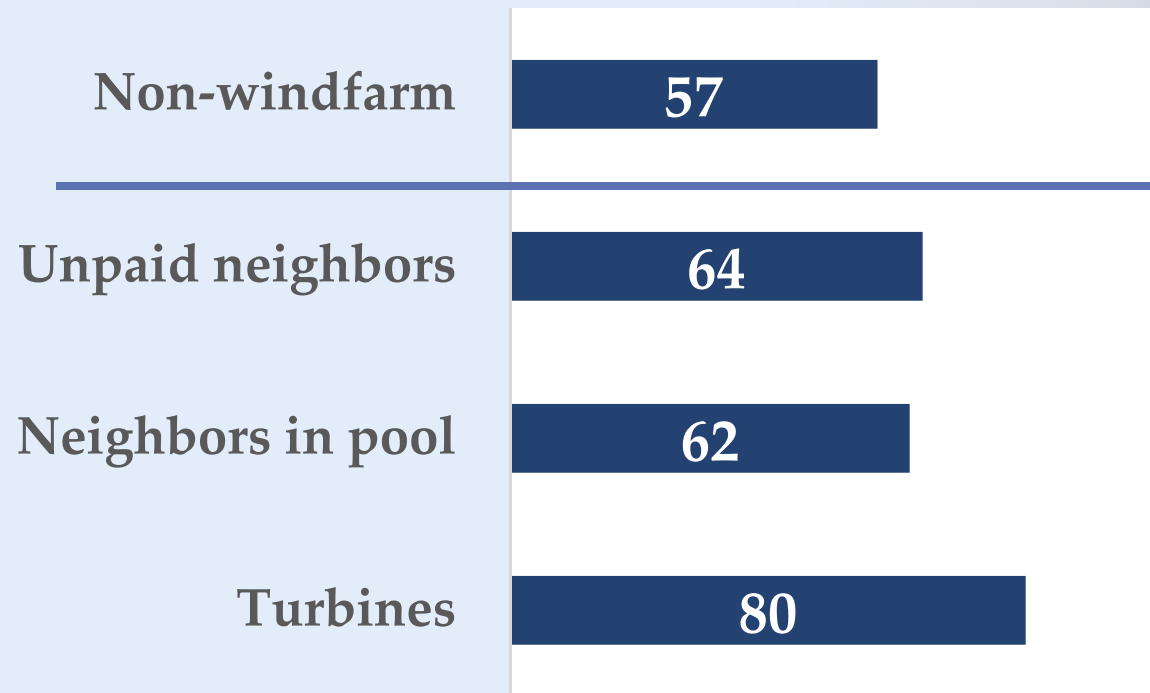
- Noise
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# Individual-level Impacts

- 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  
**BUT STILL SPLIT OPINIONS**
- Most don't see health impacts
- Having turbine on property is linked to additional on-farm investment, succession planning

# Community-level Impacts

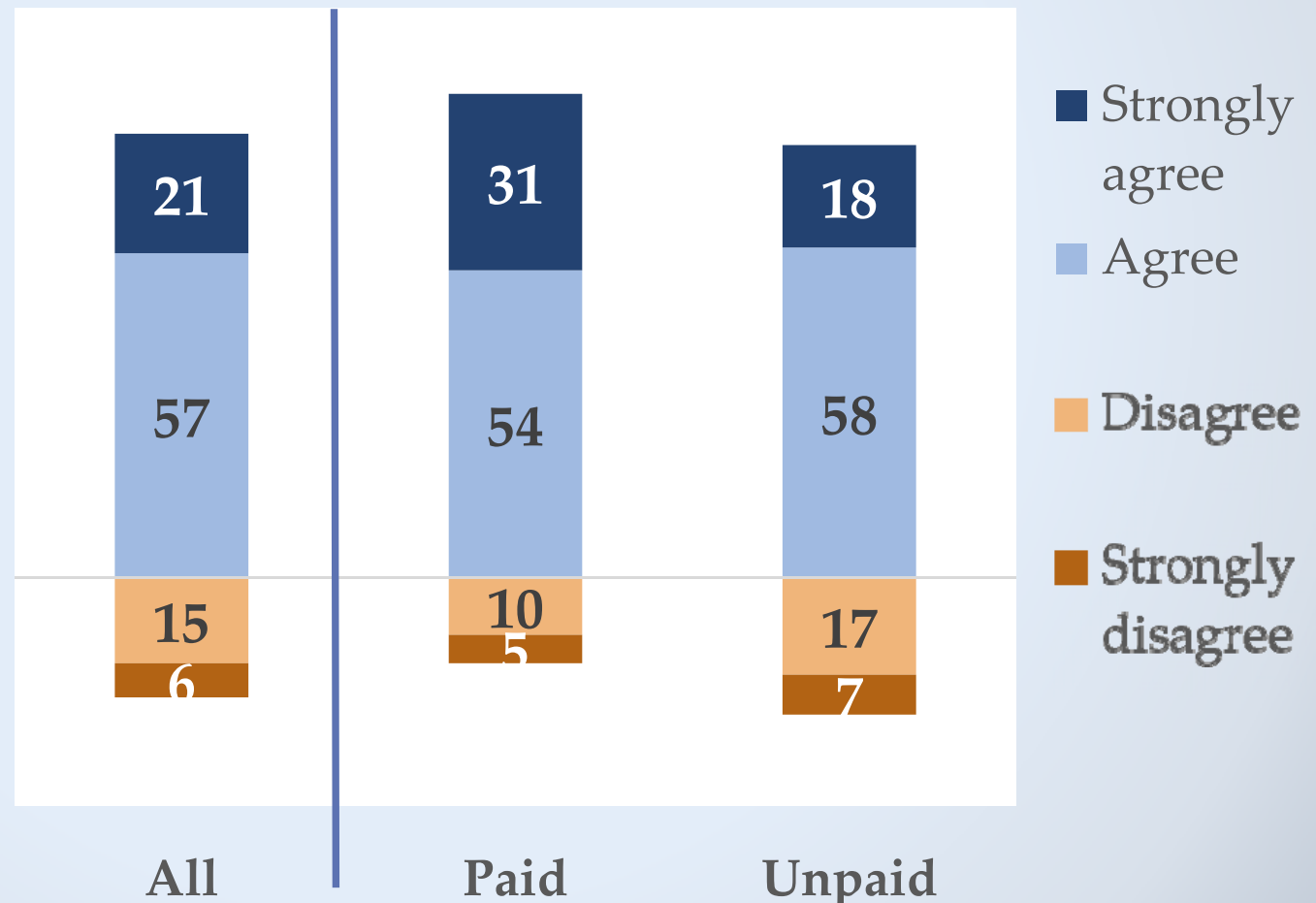
- Job creation
- Roads
- Township services
- Relationships with neighbors



# Community-level Impacts

- Job creation
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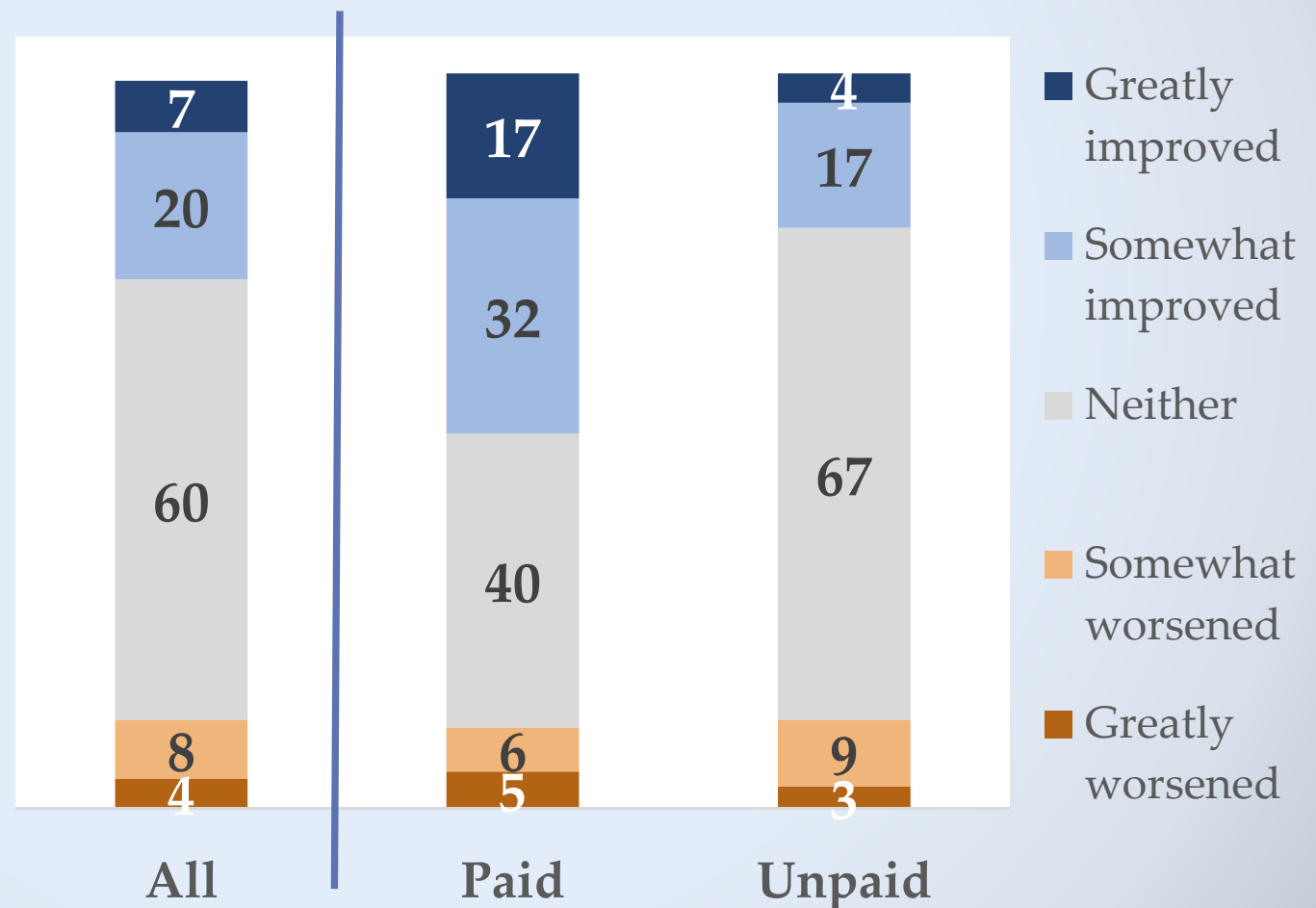
## Turbines create jobs



# Community-level Impacts

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

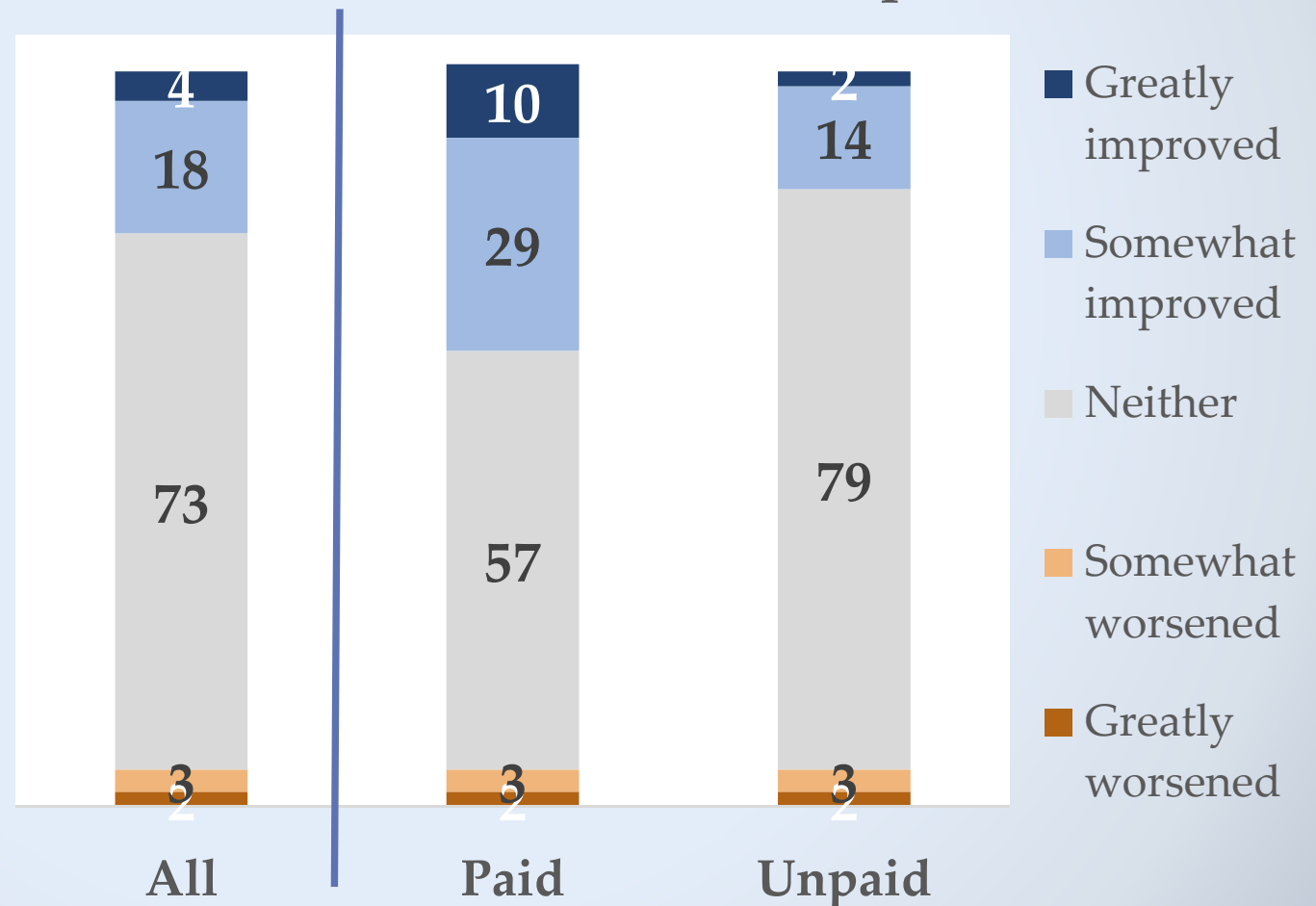
Turbines' effect on local roads



# Community-level Impacts

## Turbines' effect on township services

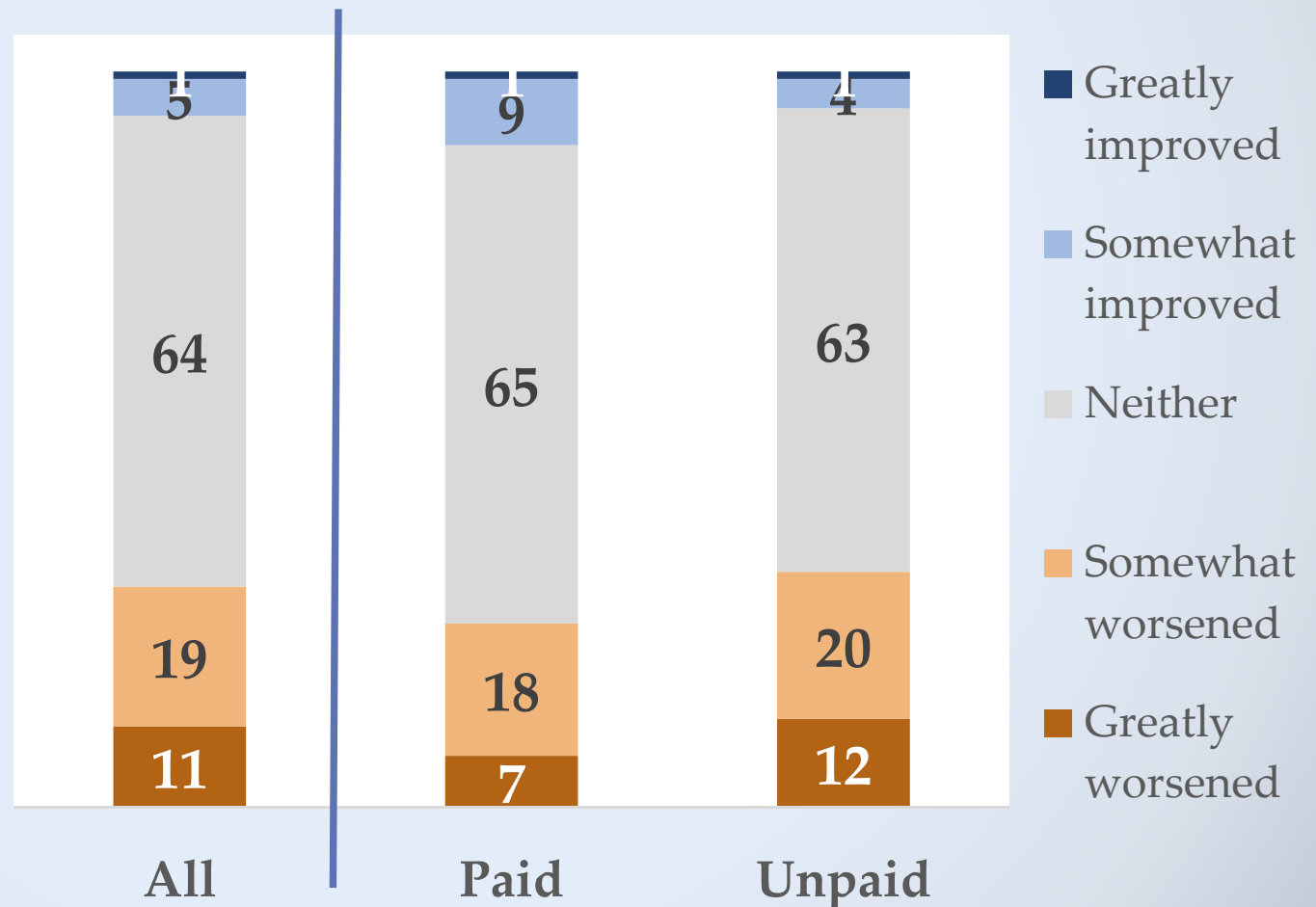
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- **Township services**
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# Community-level Impacts

Turbines' effect on relationships with neighbors

- Job creation
- Roads
- Township services
- 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

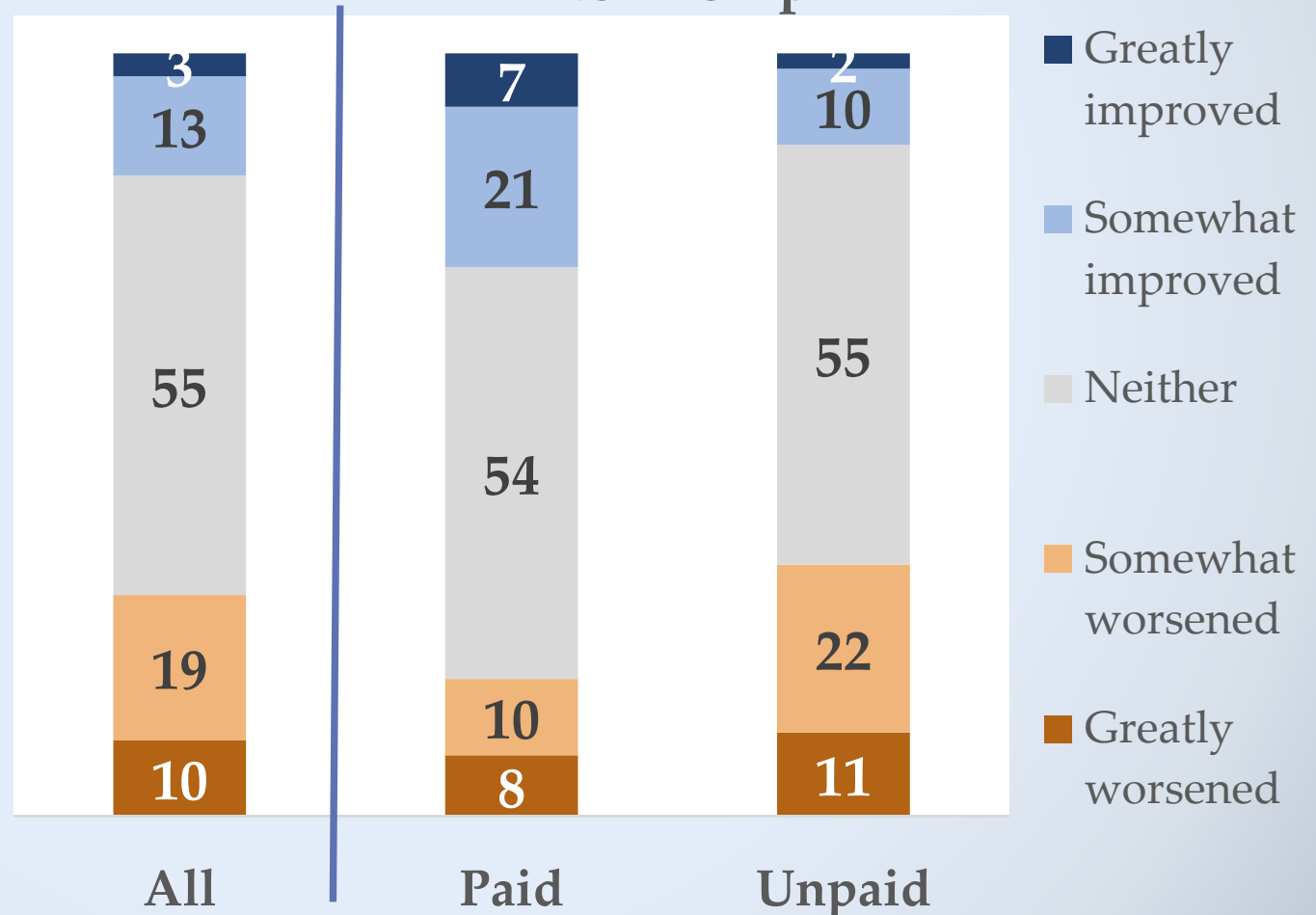
# Would they welcome wind development again?

- Quality of life
- Willingness to accept new turbines

# Would they welcome wind development again?

Turbines' effect on overall quality of life in township

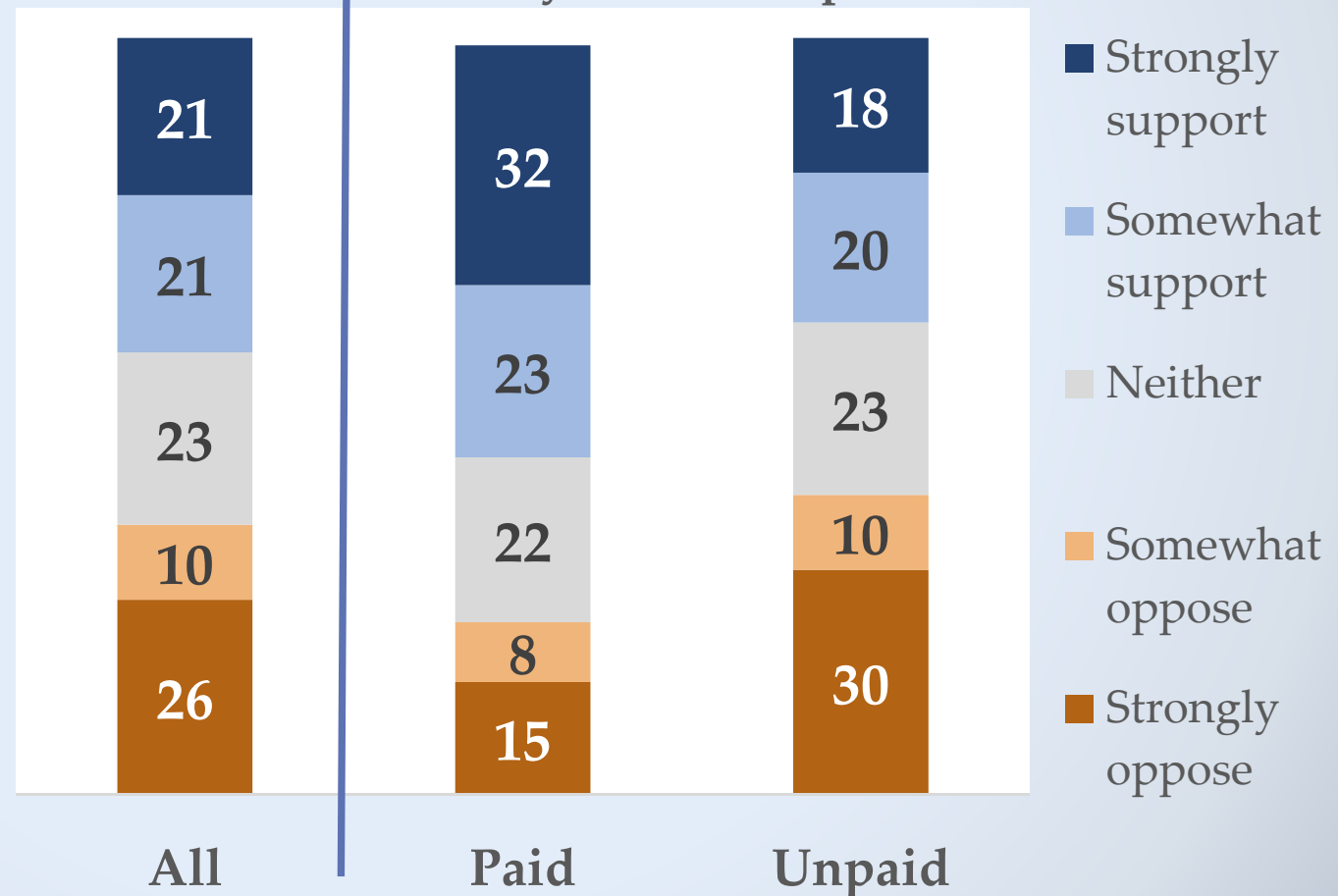
- Quality of life
- Willingness to accept new turbines



# Would they welcome wind development again?

Willingness to host additional turbines in your township

- Quality of life
- Willingness to accept new turbines





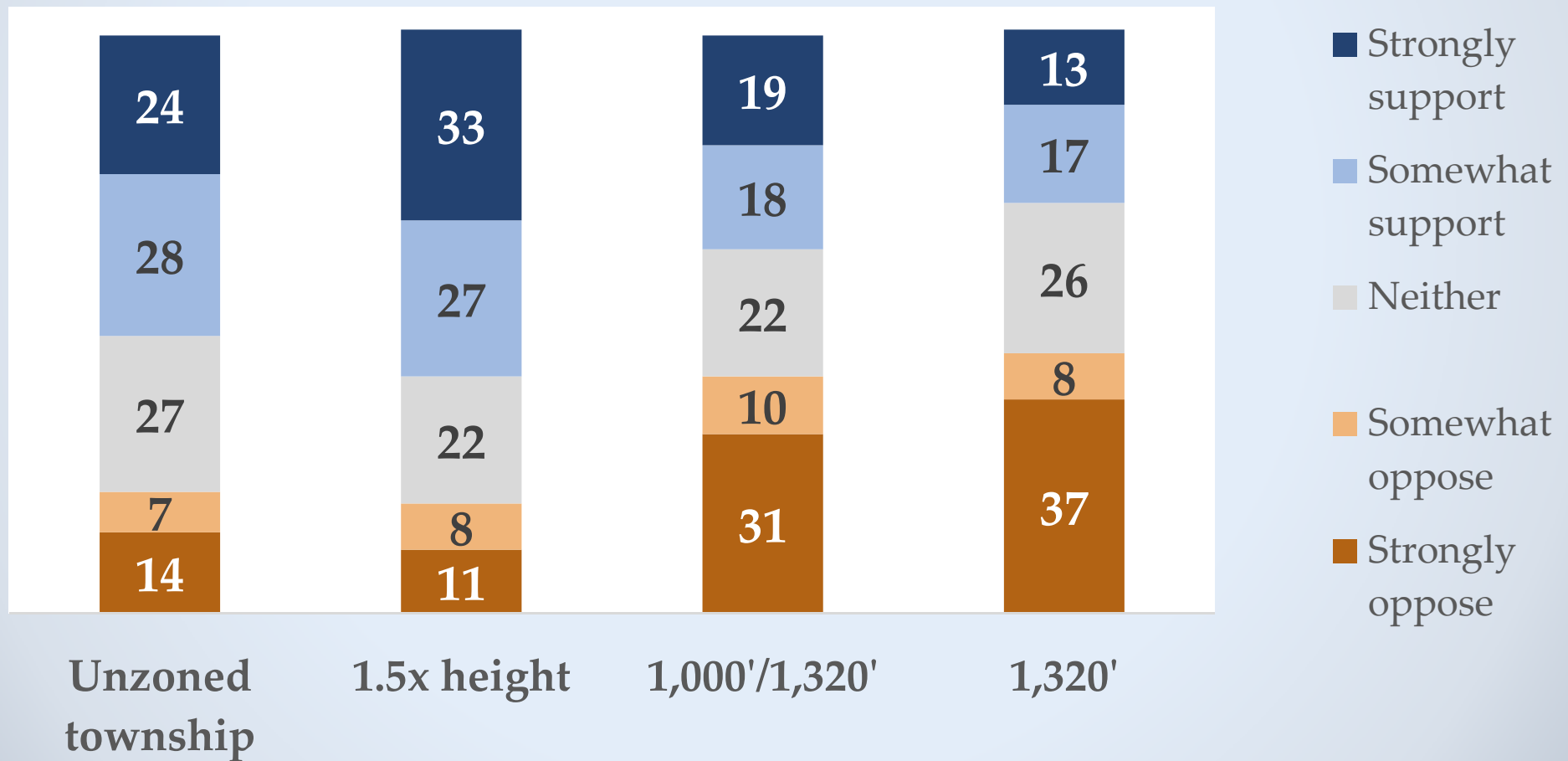
# My general recommendations ...

# 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
  - Especially if turbines placed on property lines

# The ideal setback distance?

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

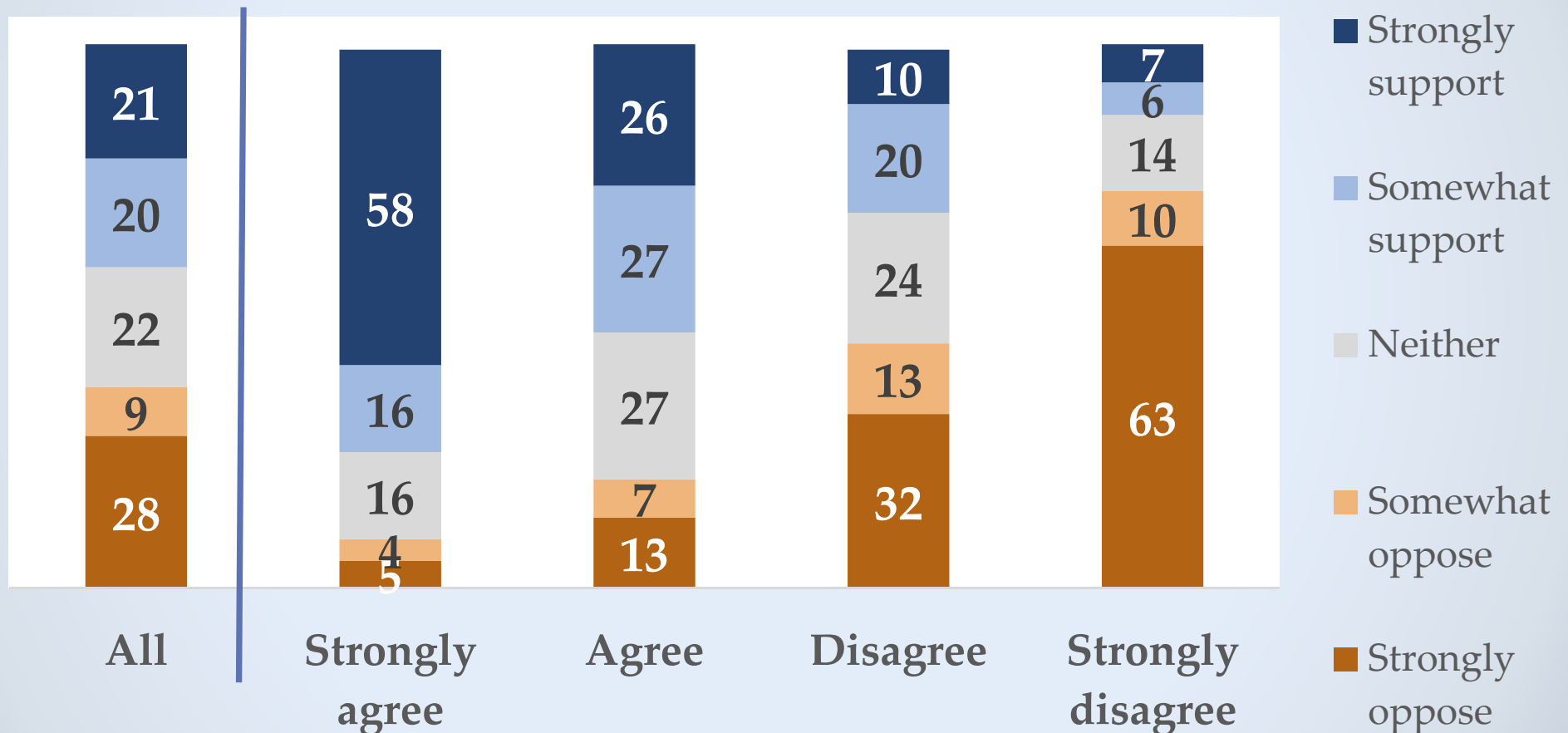


# Zoning ordinance considerations

- Participating vs. non-participating landowners
- Noise, flicker analysis
- Decommission plan/financial assurance
- Have an open & transparent process

# The importance of process

Support/oppose additional turbines in township,  
by agree/disagree opportunity to participate in planning



“I had ample opportunity to provide input during the wind project planning stage.”



Gerald R. Ford  
School of Public Policy



# The CLOSUP Wind Project

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