

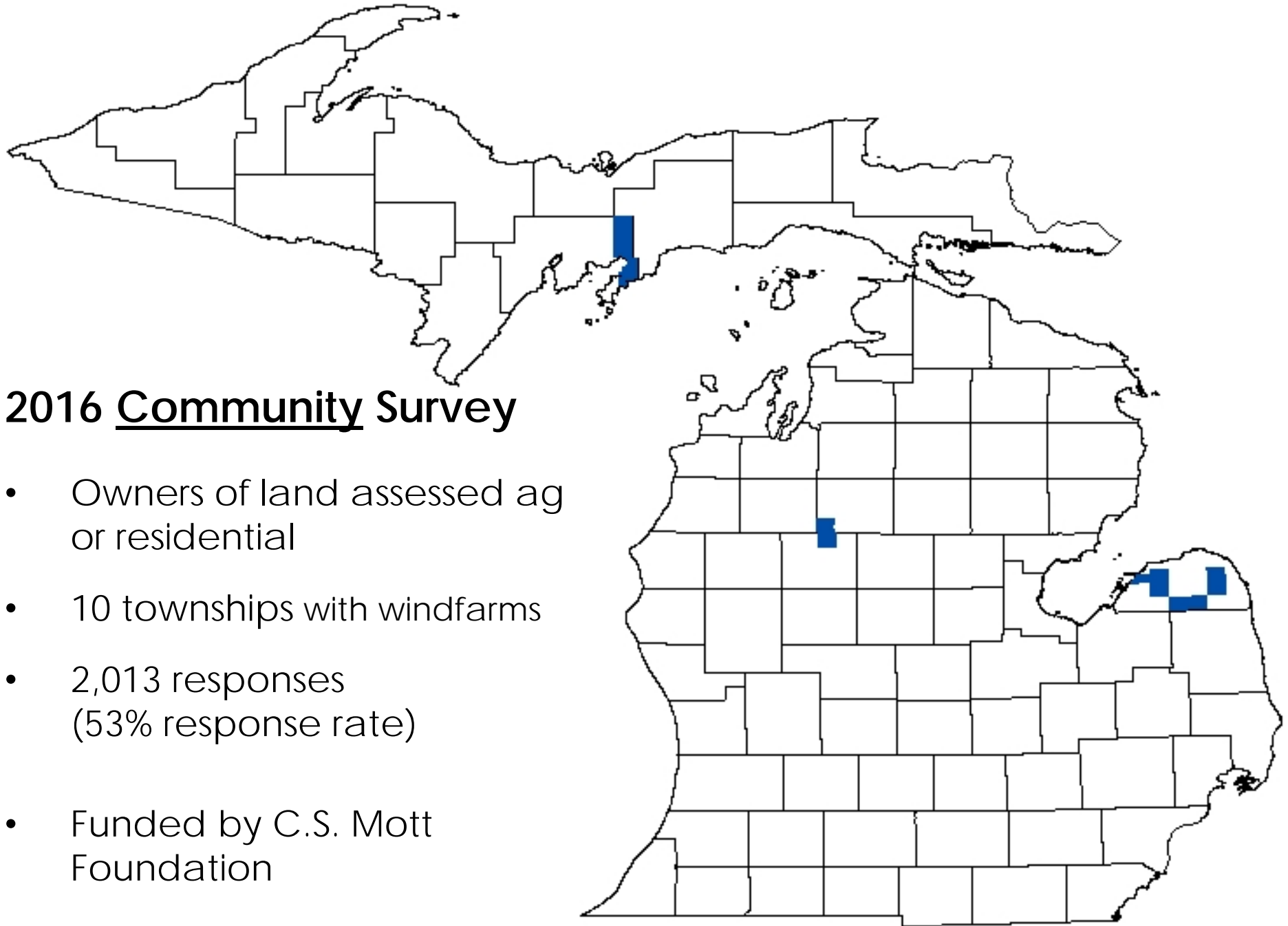
# Pros and Cons of Windfarms

Pine Township  
October 9, 2017

Sarah Mills, PhD

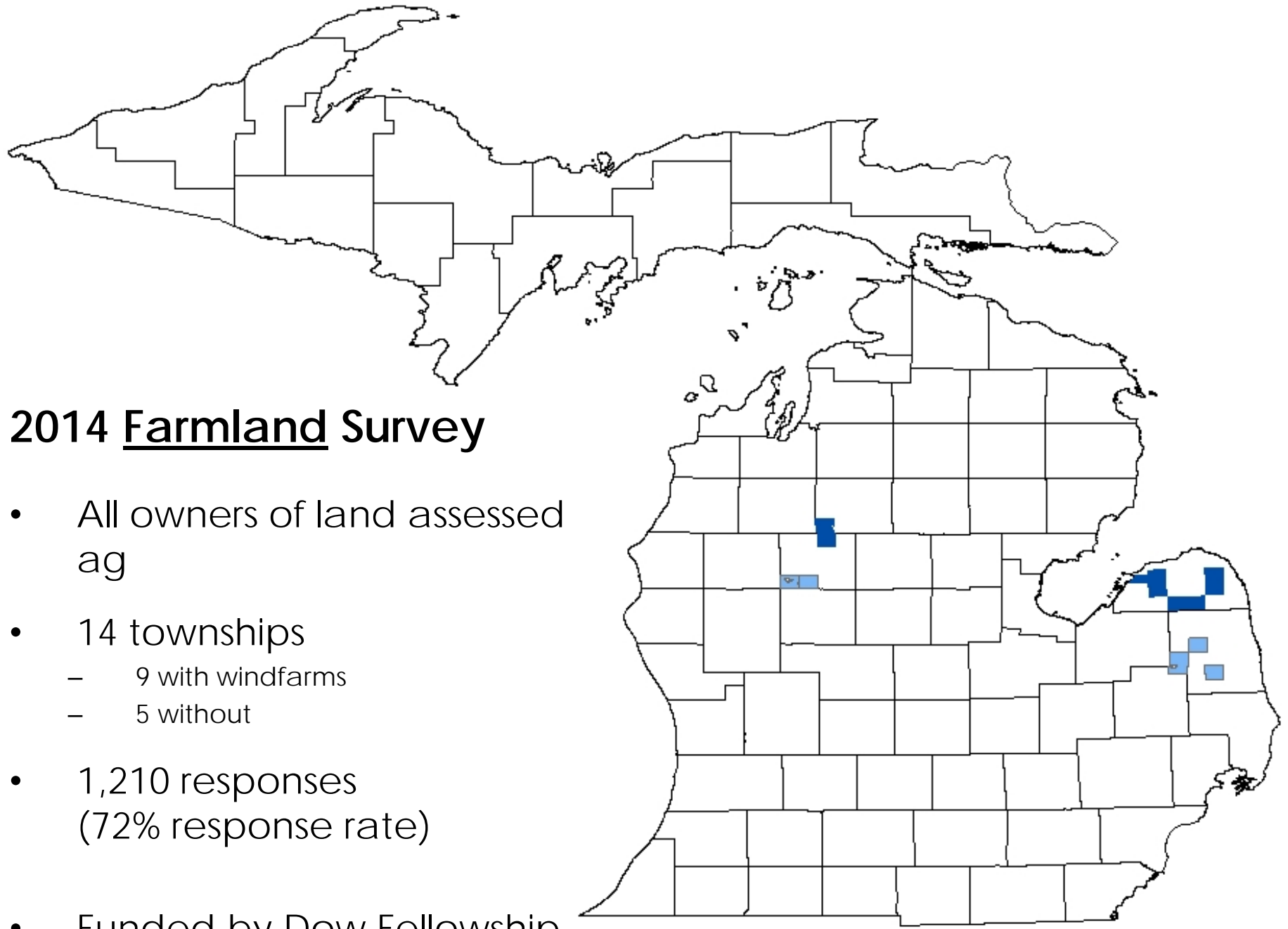
# Why am I here?

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



## 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



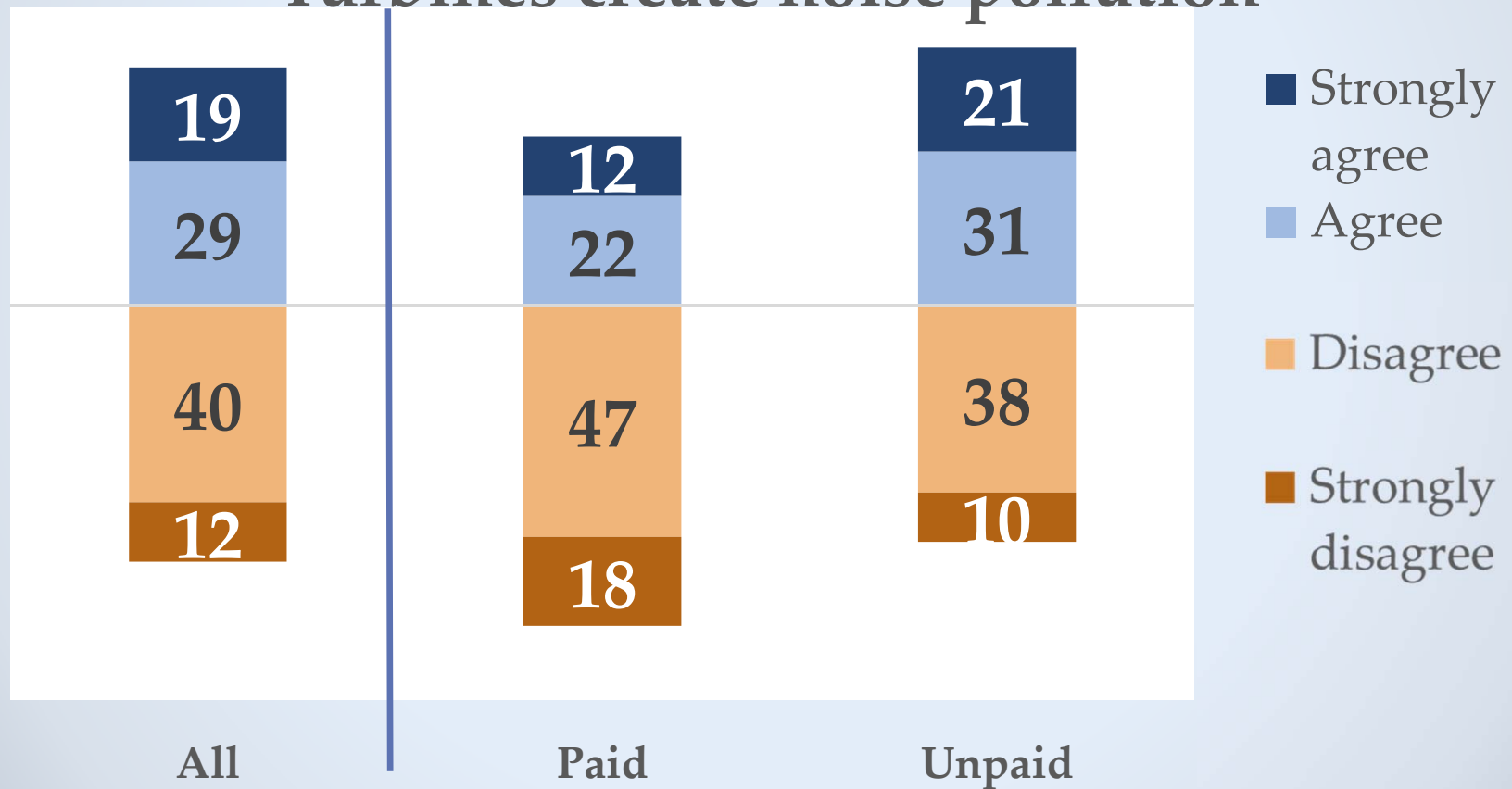
## 2014 Farmland Survey

- All owners of land assessed ag
- 14 townships
  - 9 with windfarms
  - 5 without
- 1,210 responses  
(72% response rate)
- Funded by Dow Fellowship

# Common arguments AGAINST wind turbines ...

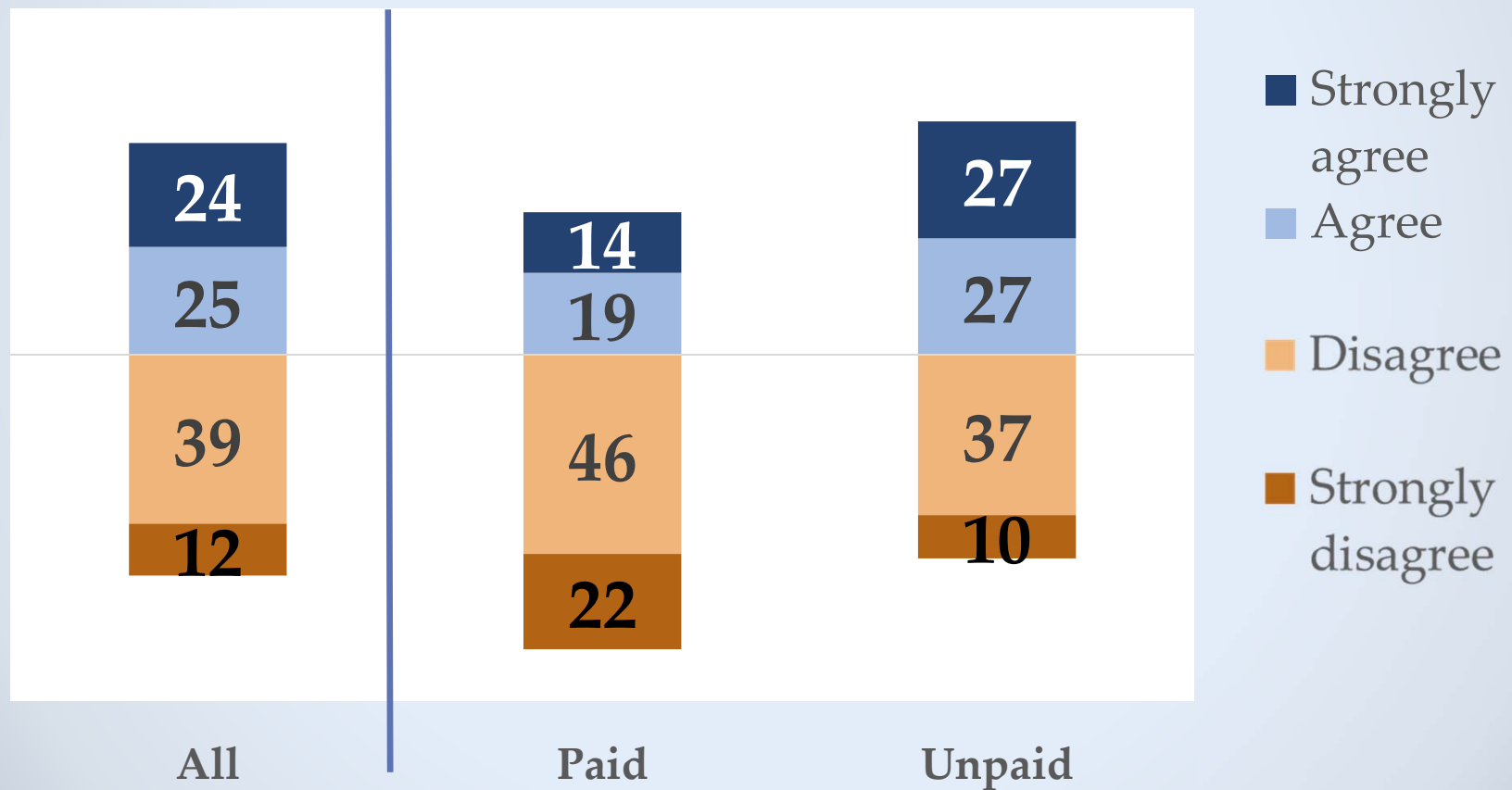
# Noise

## Turbines create noise pollution



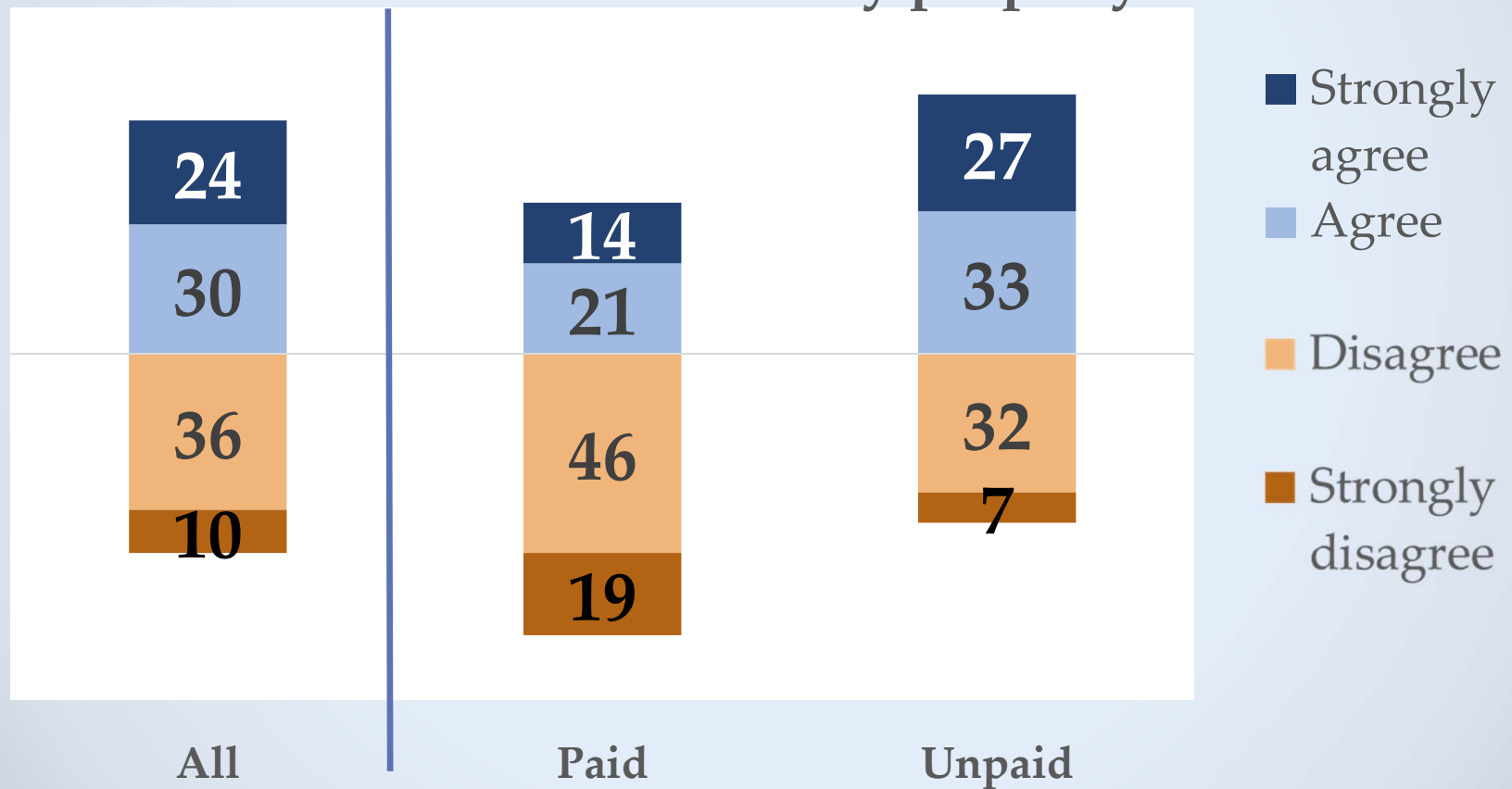
# Visual/Aesthetic

Turbines create visual/aesthetic problems



# Property values

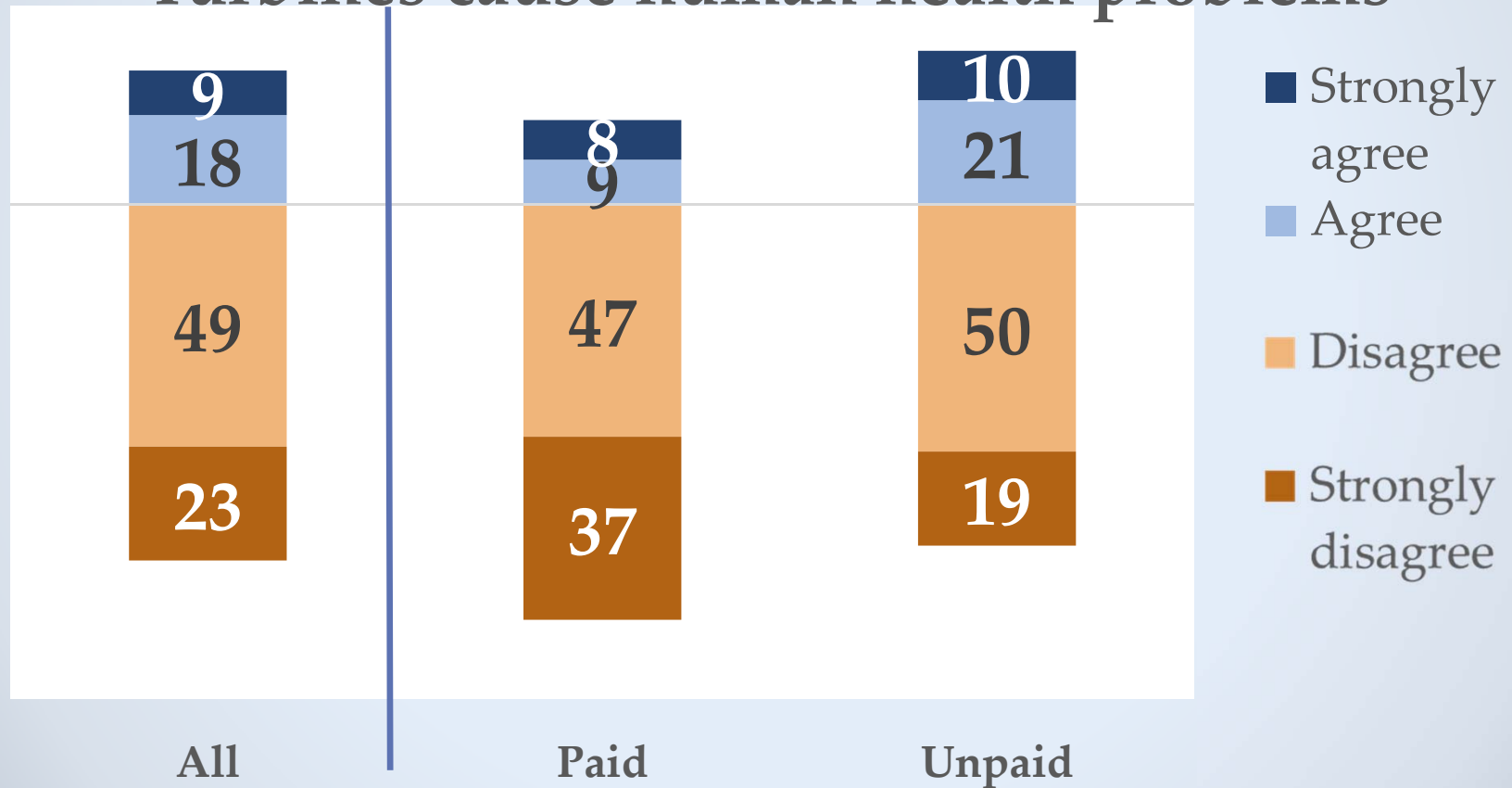
## Turbines decrease nearby property values





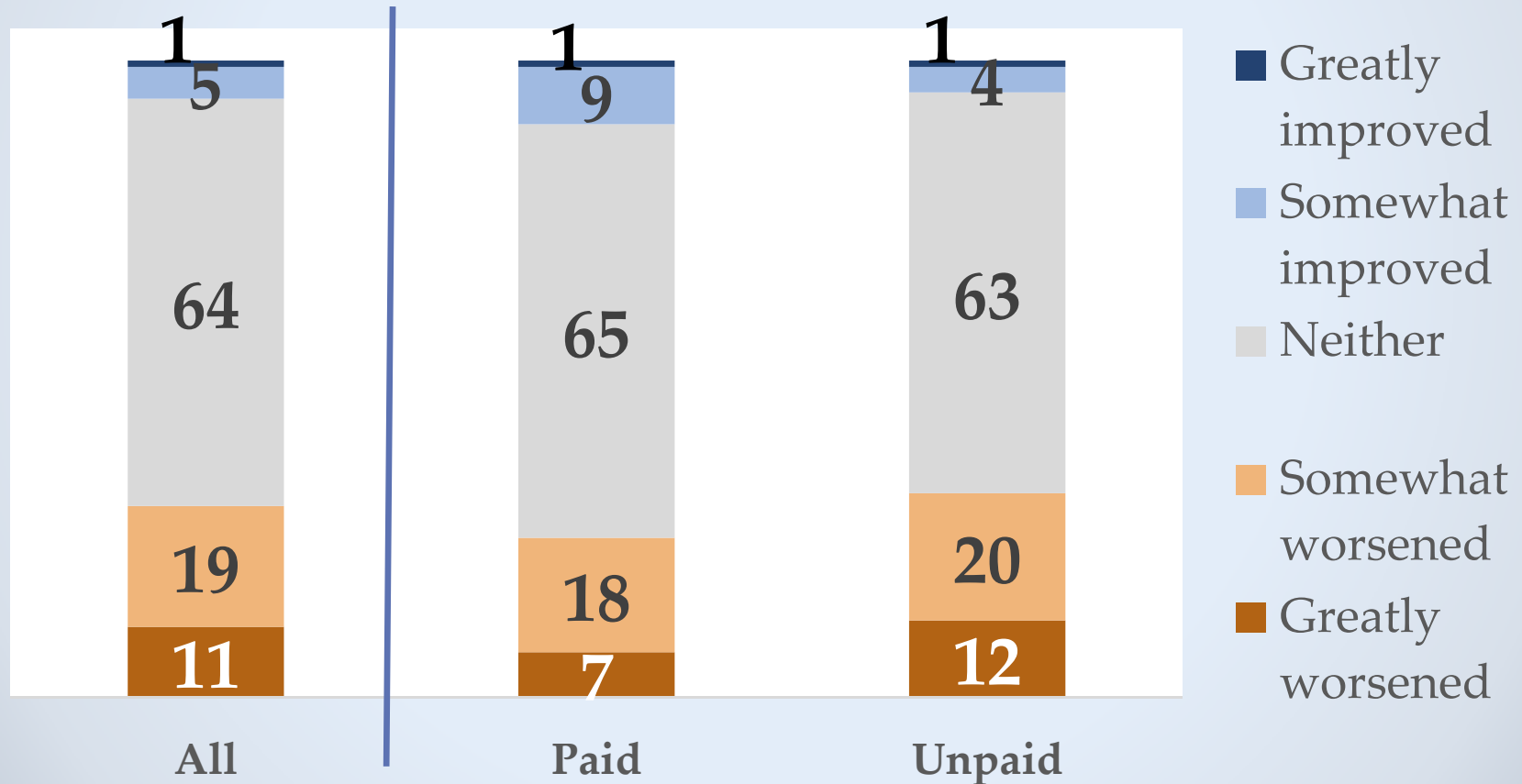
# Health Problems

## Turbines cause human health problems



# Relationships with Neighbors

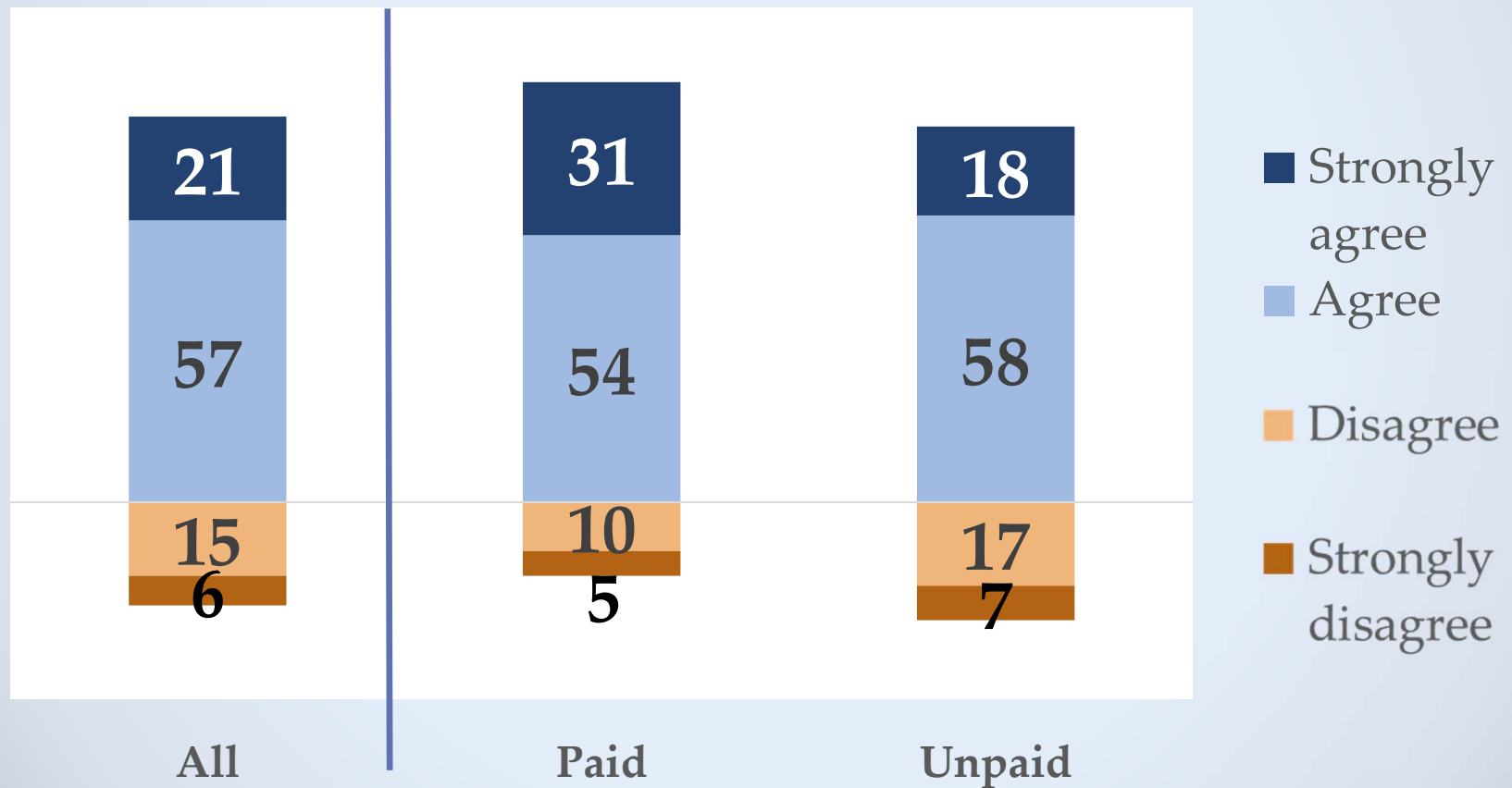
Turbines' effect on relationships with neighbors



# Common arguments FOR wind turbines ...

# Job Creation

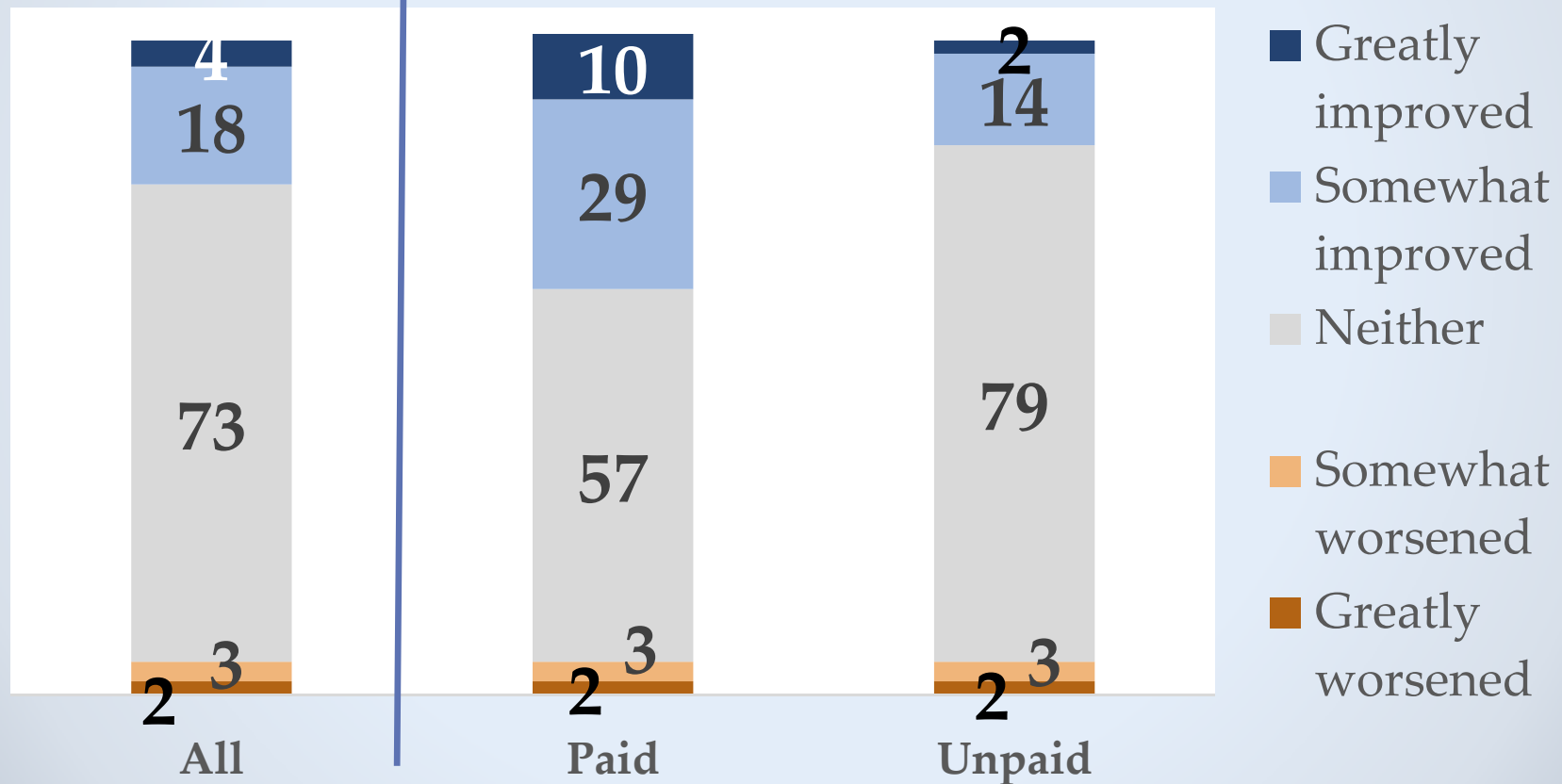
Turbines create jobs



# Tax benefits

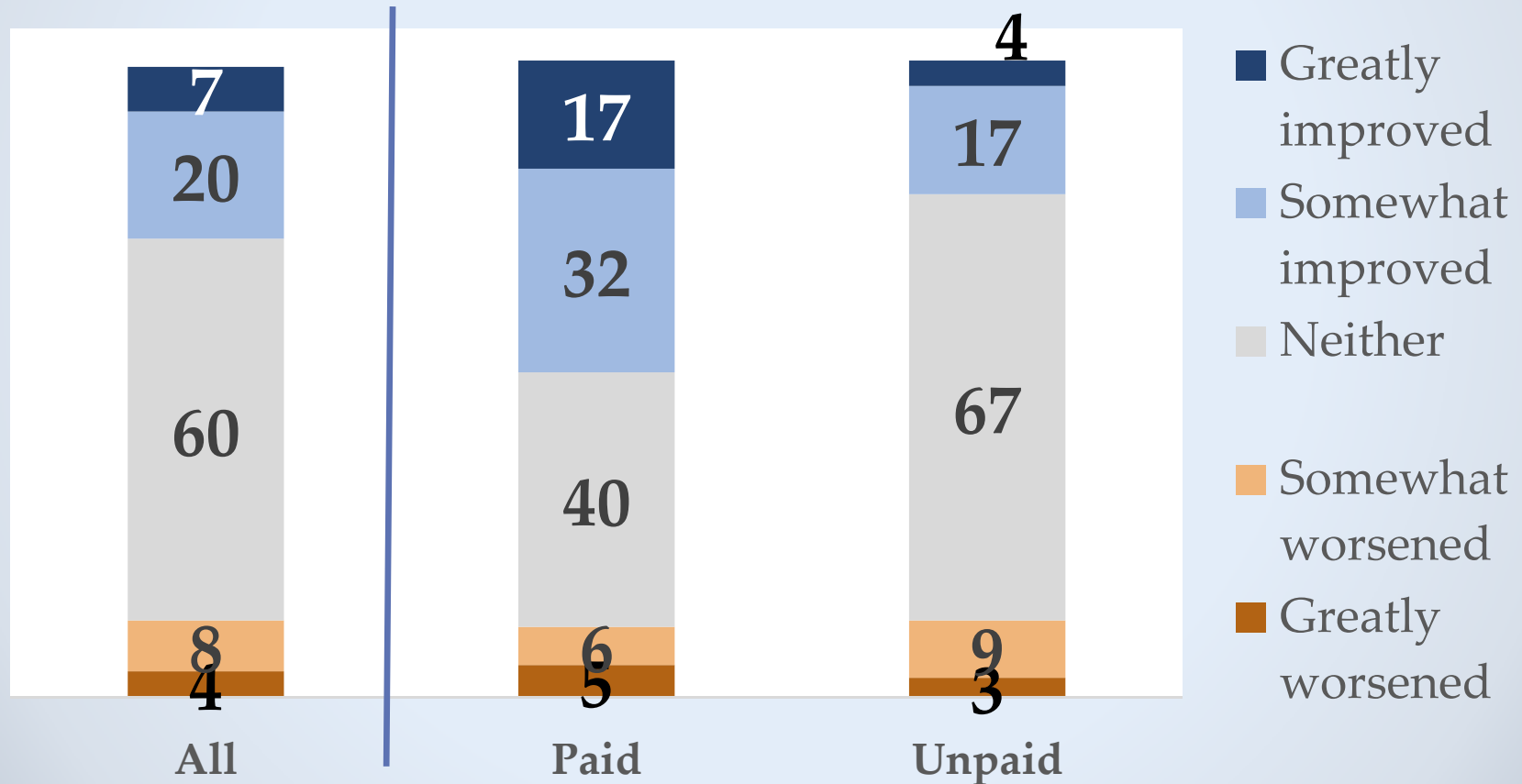
~\$2.1 M  
taxable value /  
turbine

## Turbines' effect on township services



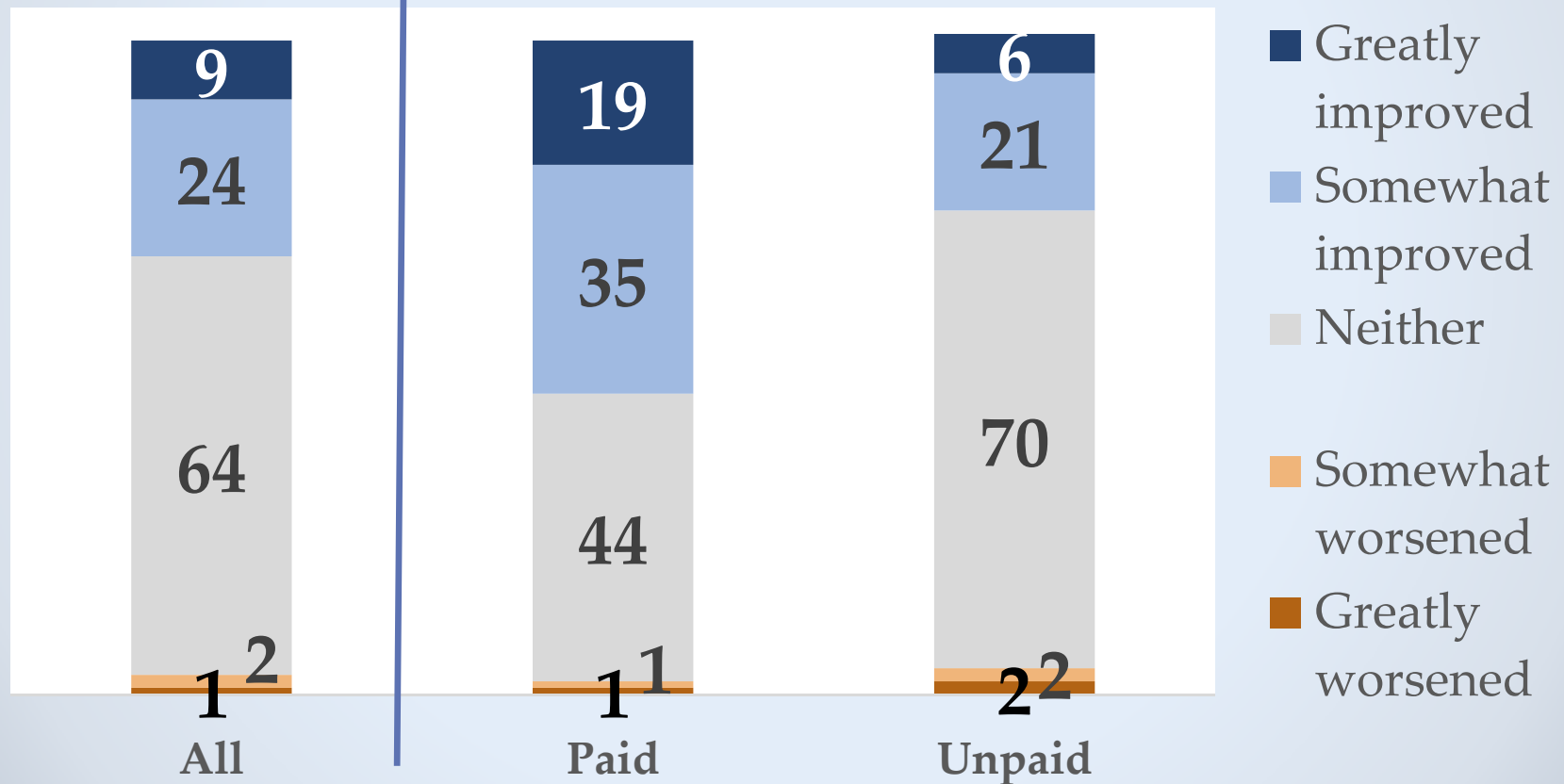
# Roads

Turbines' effect on local roads



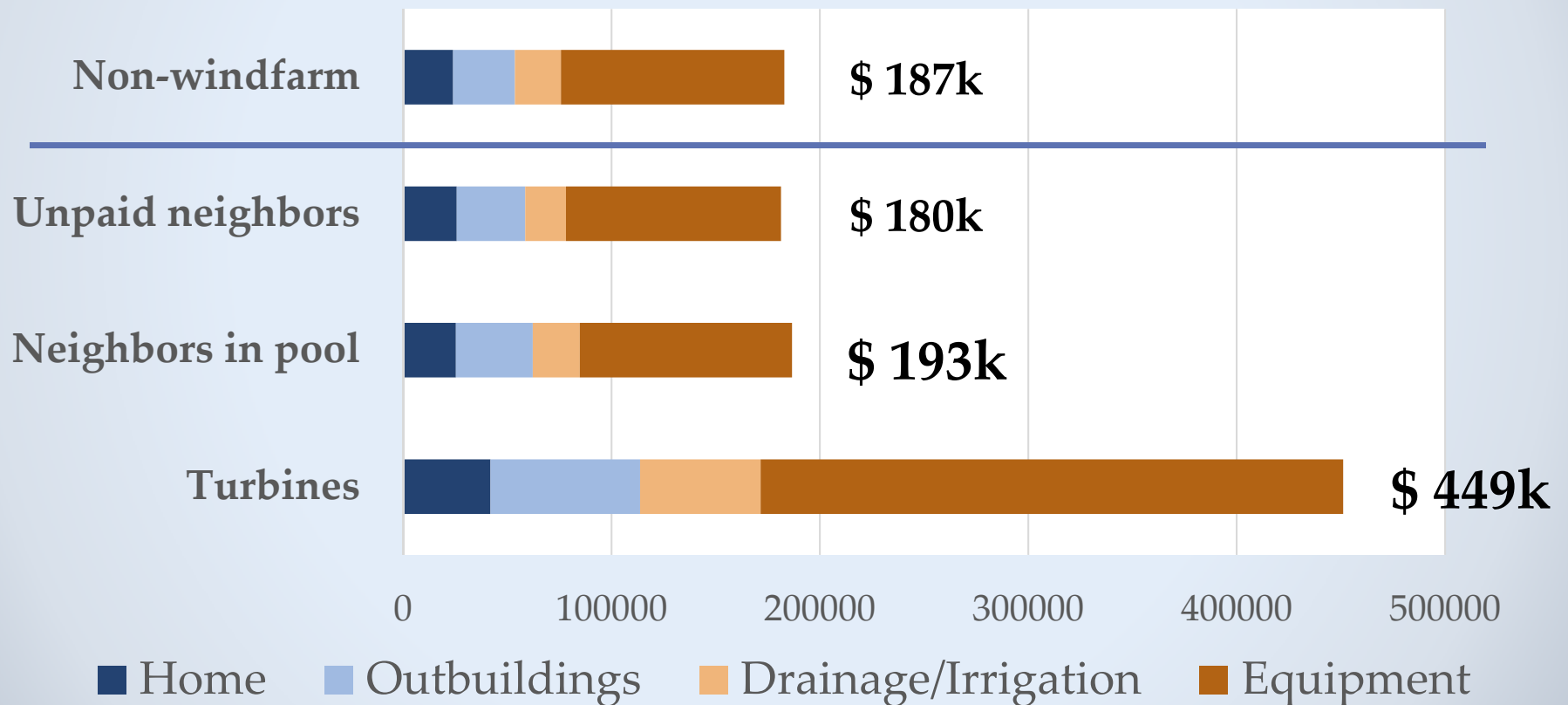
# Local Schools

## Turbines' effect on local schools



# Farm Income

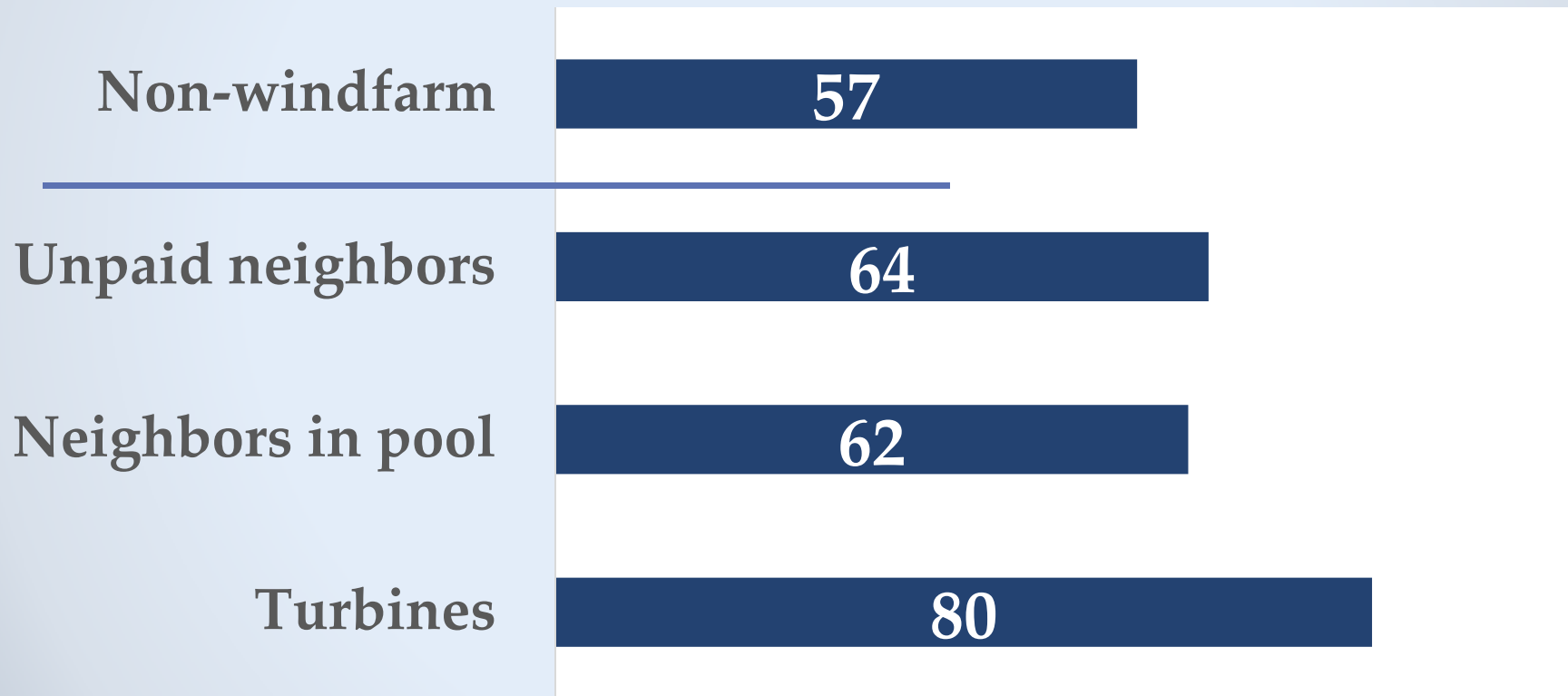
Investments over 5 years: 2009-2013





# Farm Succession

% that have farm succession plan



# Overall drivers of attitudes

- Direct compensation
- Being within earshot of turbines
- Attitudes about process, wind developer
- Type of land owned
  - secondary vs. primary residence
  - farmland / rental property *only*

# What lessons do I draw?

- If goal is for substantial residential development or growth of tourism, wind may not be right
  - These landowners less likely to directly benefit
  - Some may be deterred from building
- If goal is to sustain agriculture, wind can fit
  - Farm diversification & succession planning
  - Keeping young people on the farm/in town
  - Adds to the property tax base
  - Siting on property lines takes little land out of production
    - Compatible with PA 116

# My recommendation

- Your township should decide if this type of economic development fits with your goals
  - My take: your Master Plan talks both about farmland preservation and scenic lake amenities, so I'm not sure!
- You can develop a legally-defensible zoning ordinance that encourages or discourages wind developers
  - Encourages: Gratiot County
  - Discourages: Lake Township, Riga Township

# What my research suggests on zoning

- Have an open & transparent process
- Best fit in ag preservation district
- Participating vs. non-participating landowners
- Noise, flicker analysis
- Decommission plan/financial assurance



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# The CLOSUP Wind Project

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