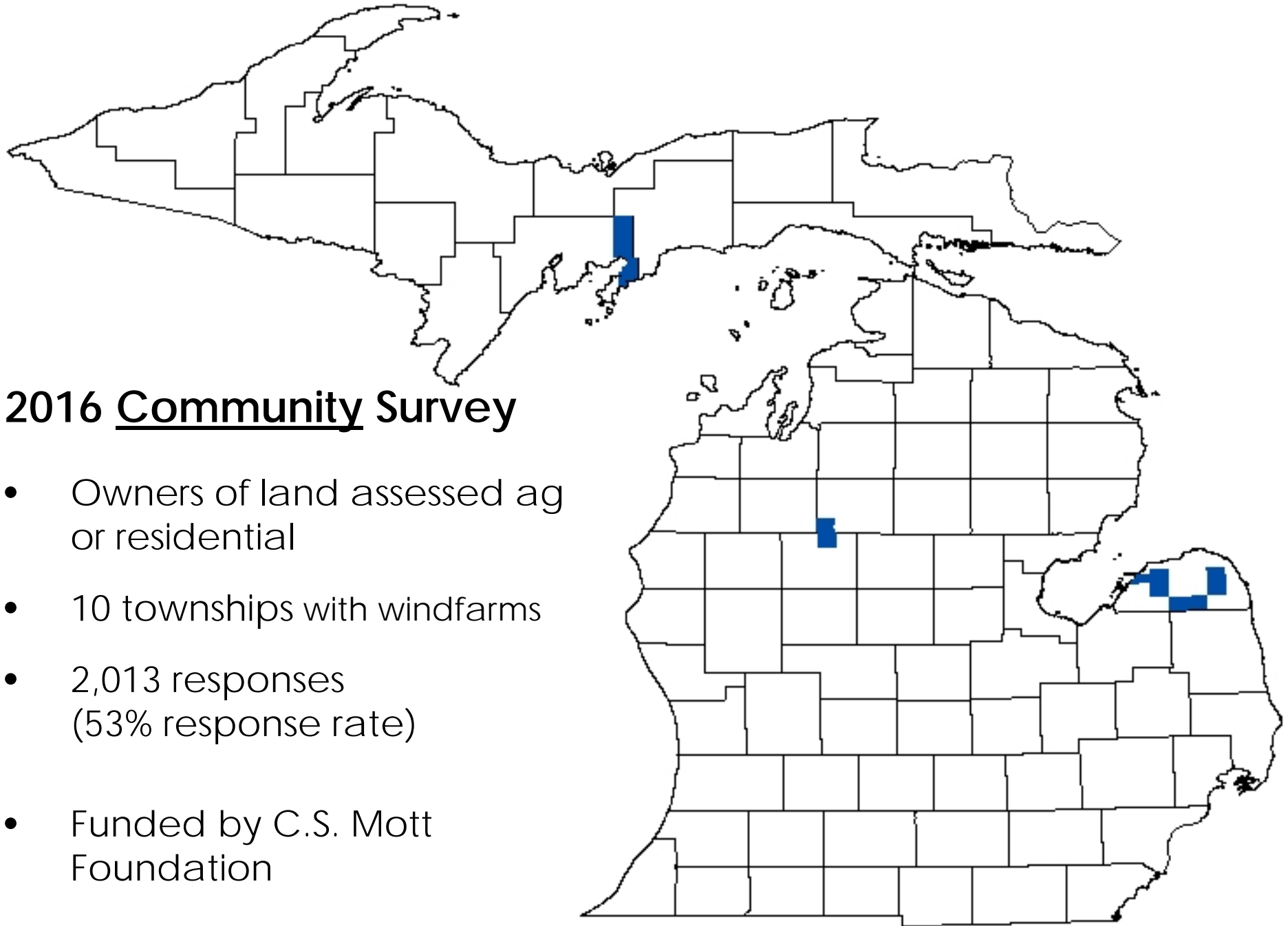


Pros and Cons of Wind Turbines Experiences from Michigan

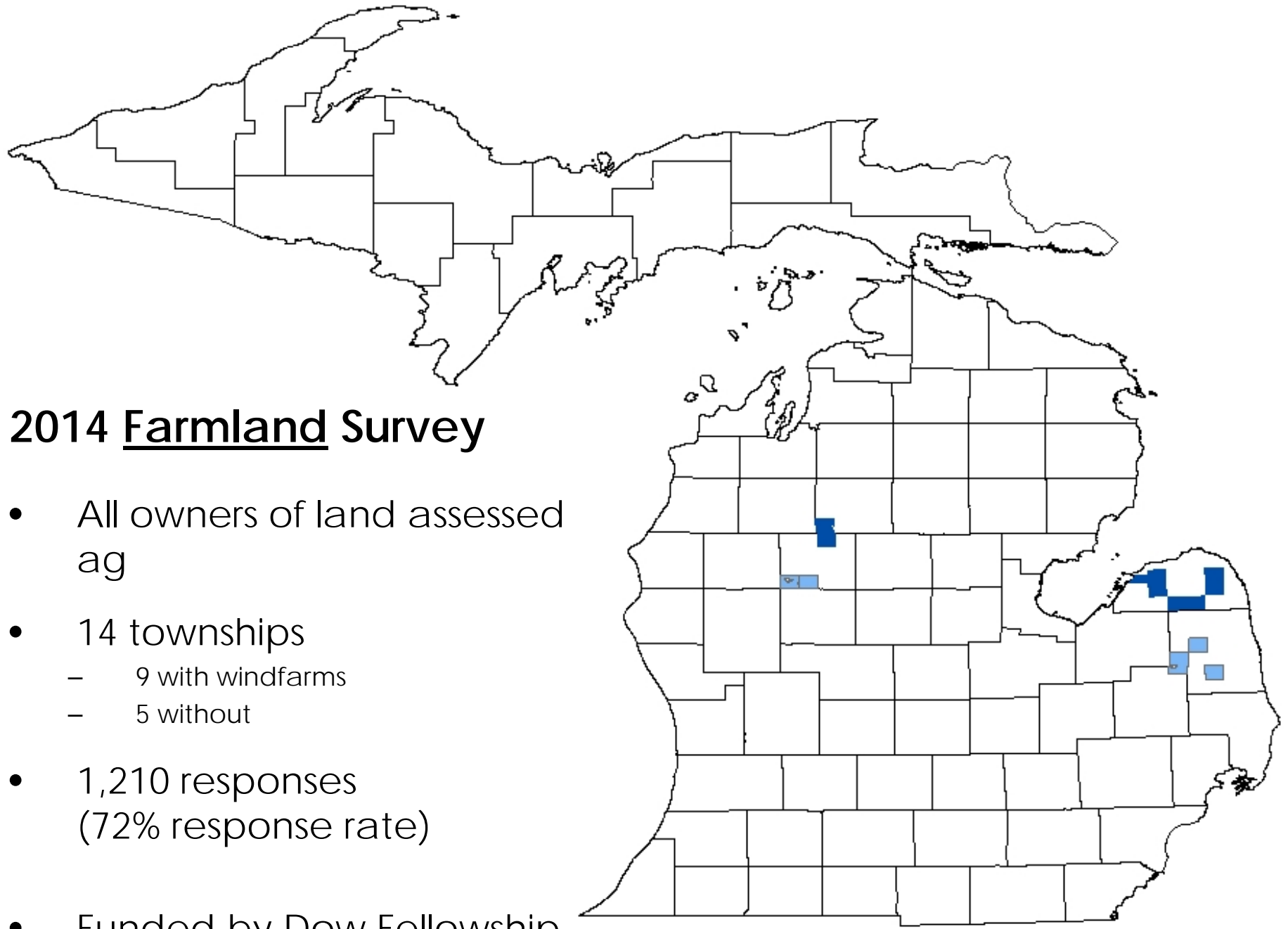
Gibson Township
August 14, 2017

Sarah Mills, PhD



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

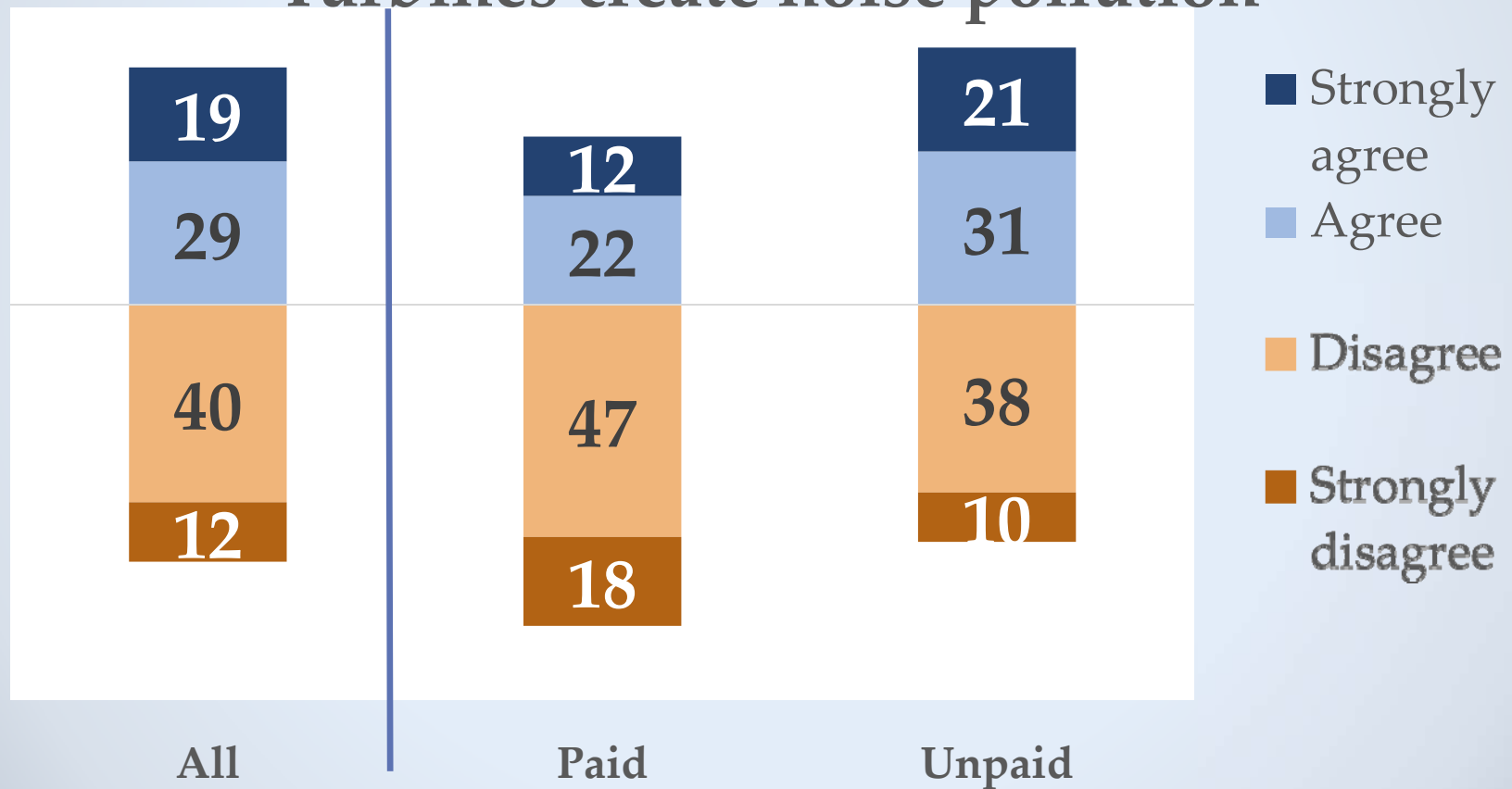
Overall drivers of attitudes

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

Common arguments AGAINST wind turbines ...

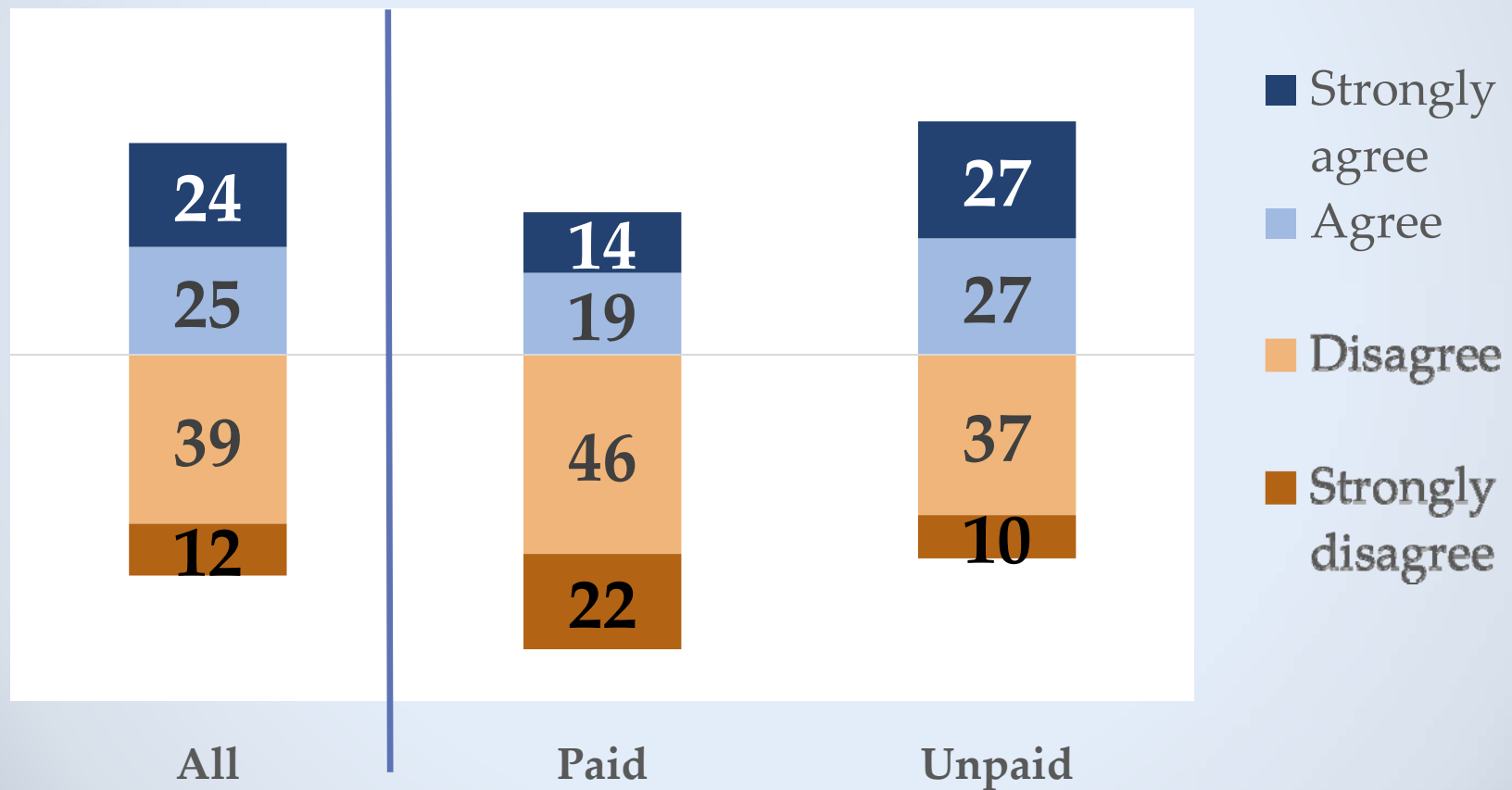
Noise

Turbines create noise pollution



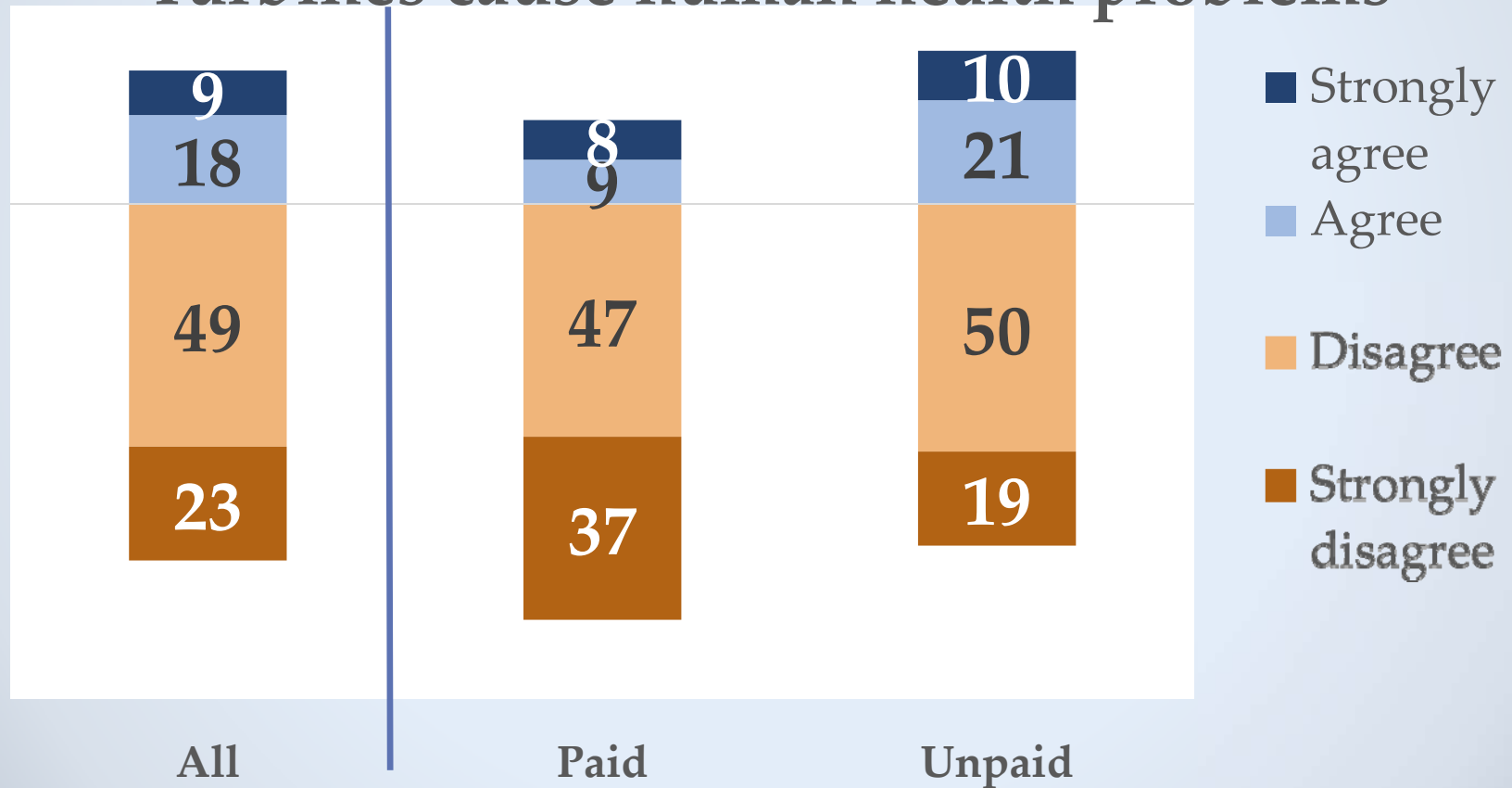
Visual/Aesthetic

Turbines create visual/aesthetic problems



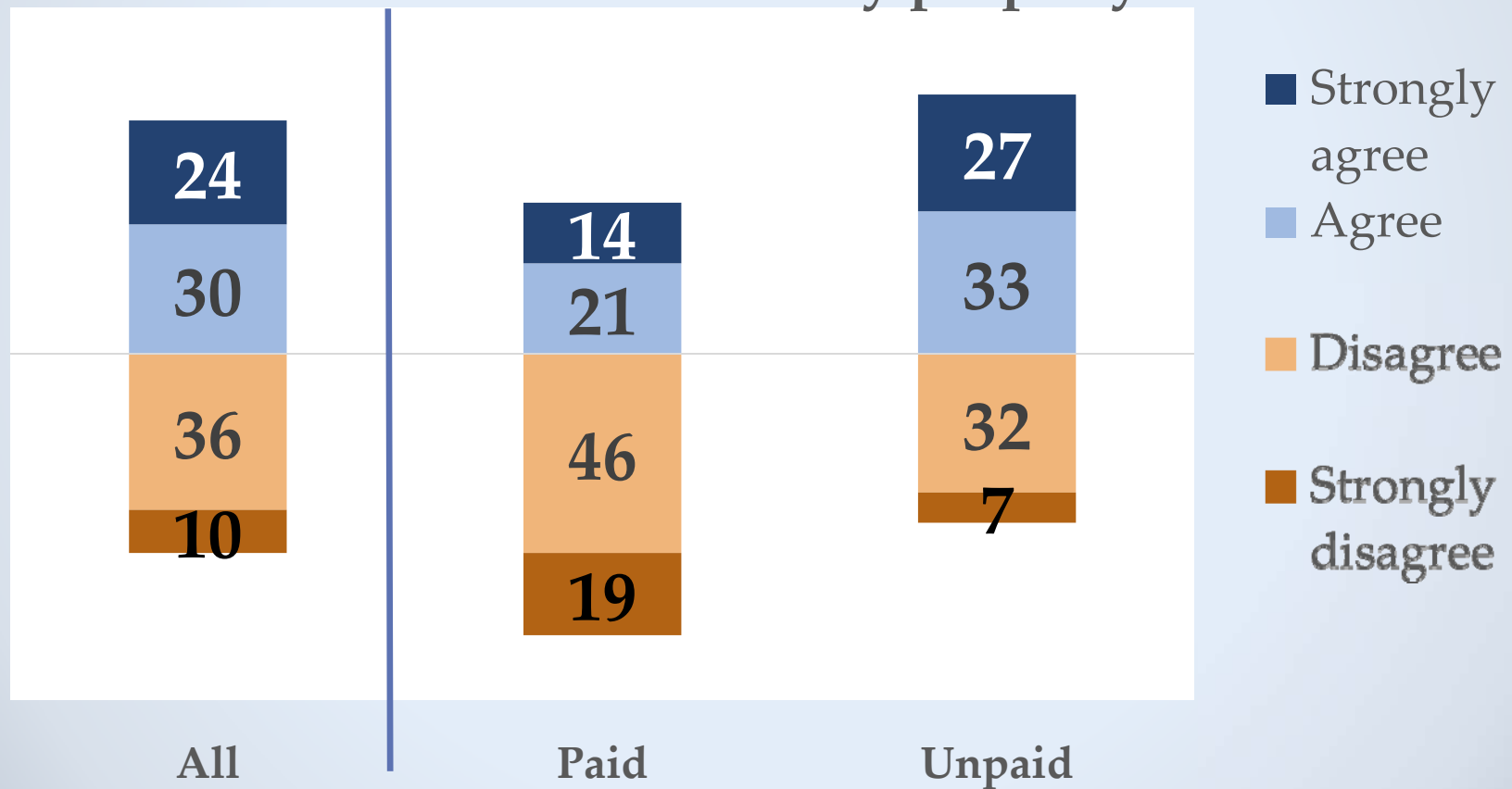
Health Problems

Turbines cause human health problems



Property values

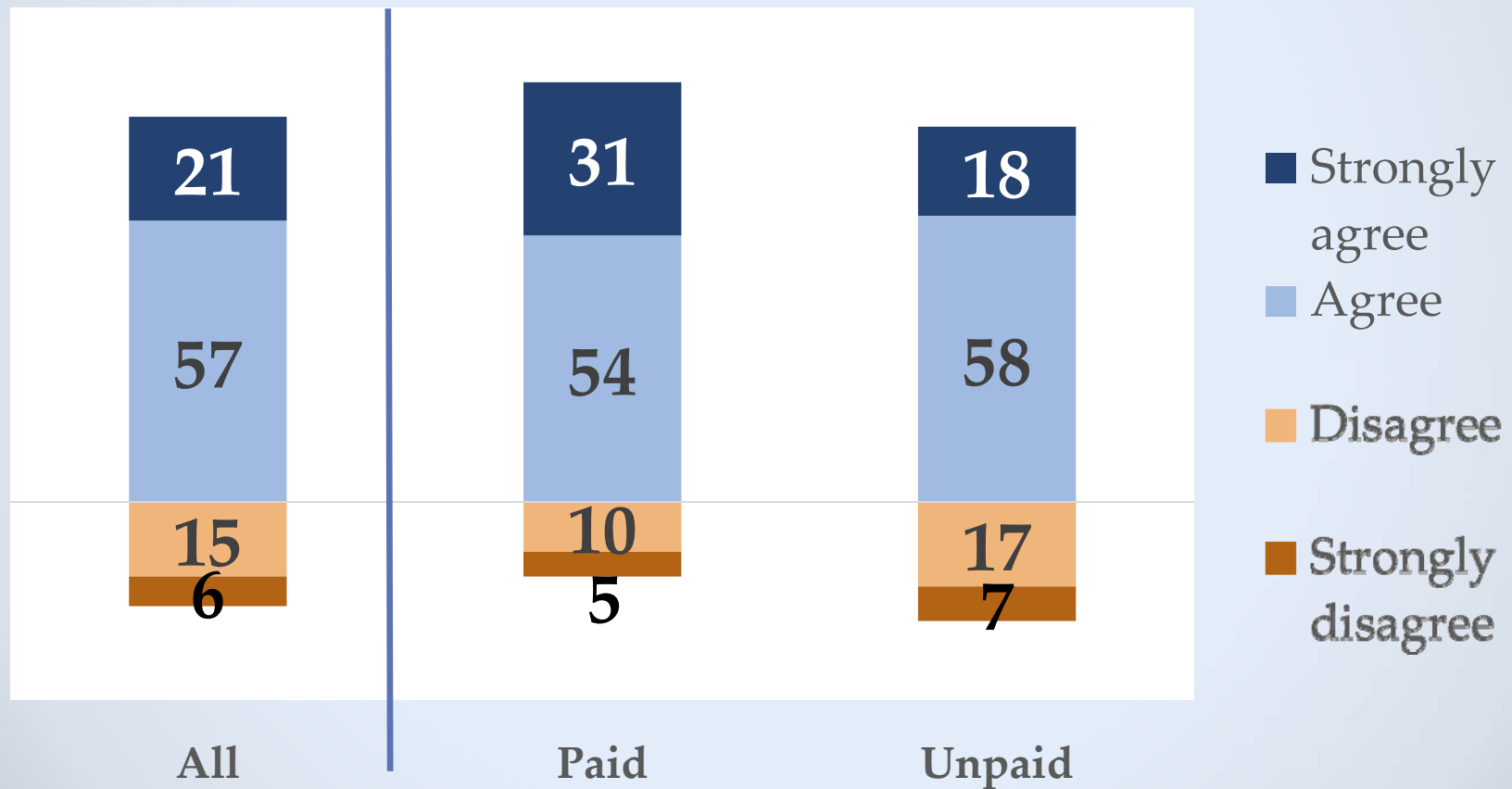
Turbines decrease nearby property values



Common arguments FOR wind turbines ...

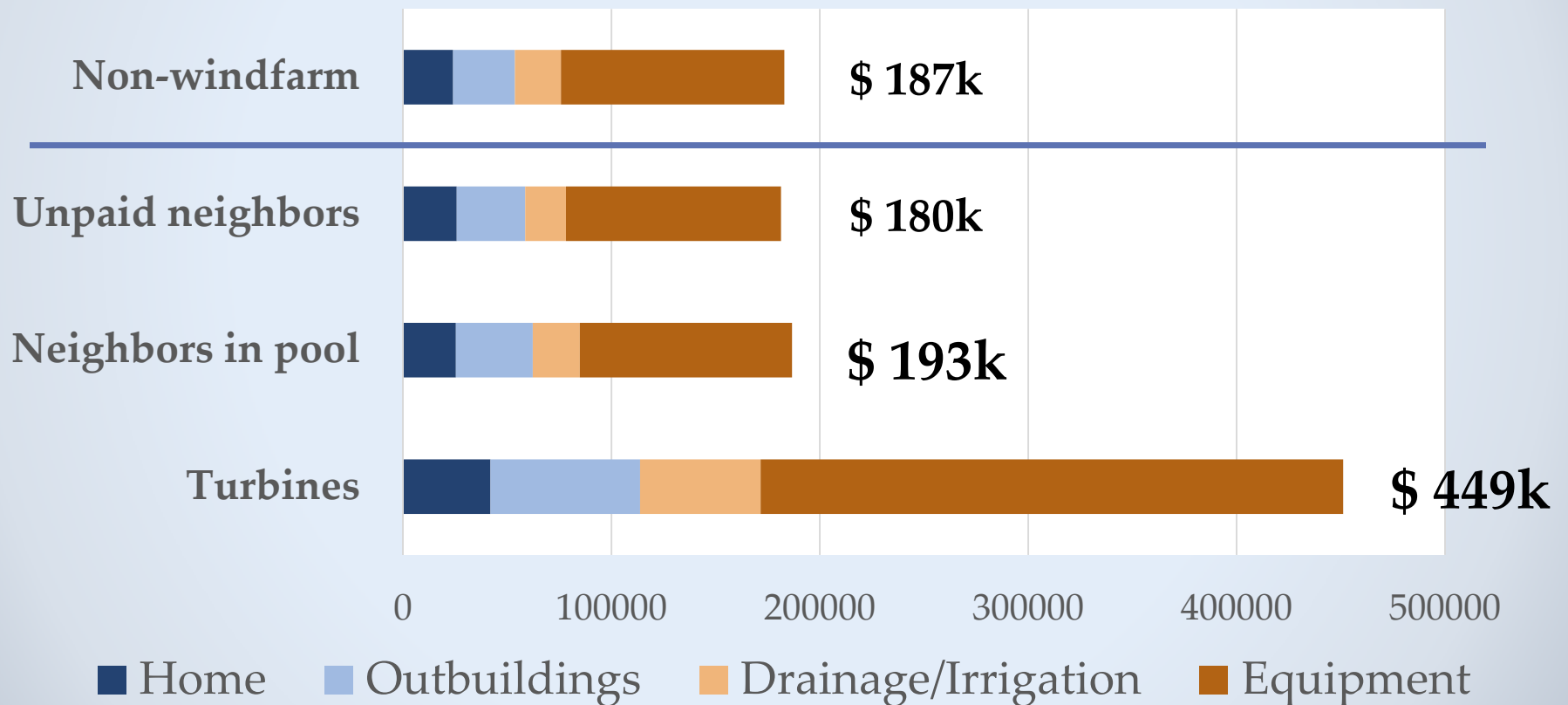
Job Creation

Turbines create jobs



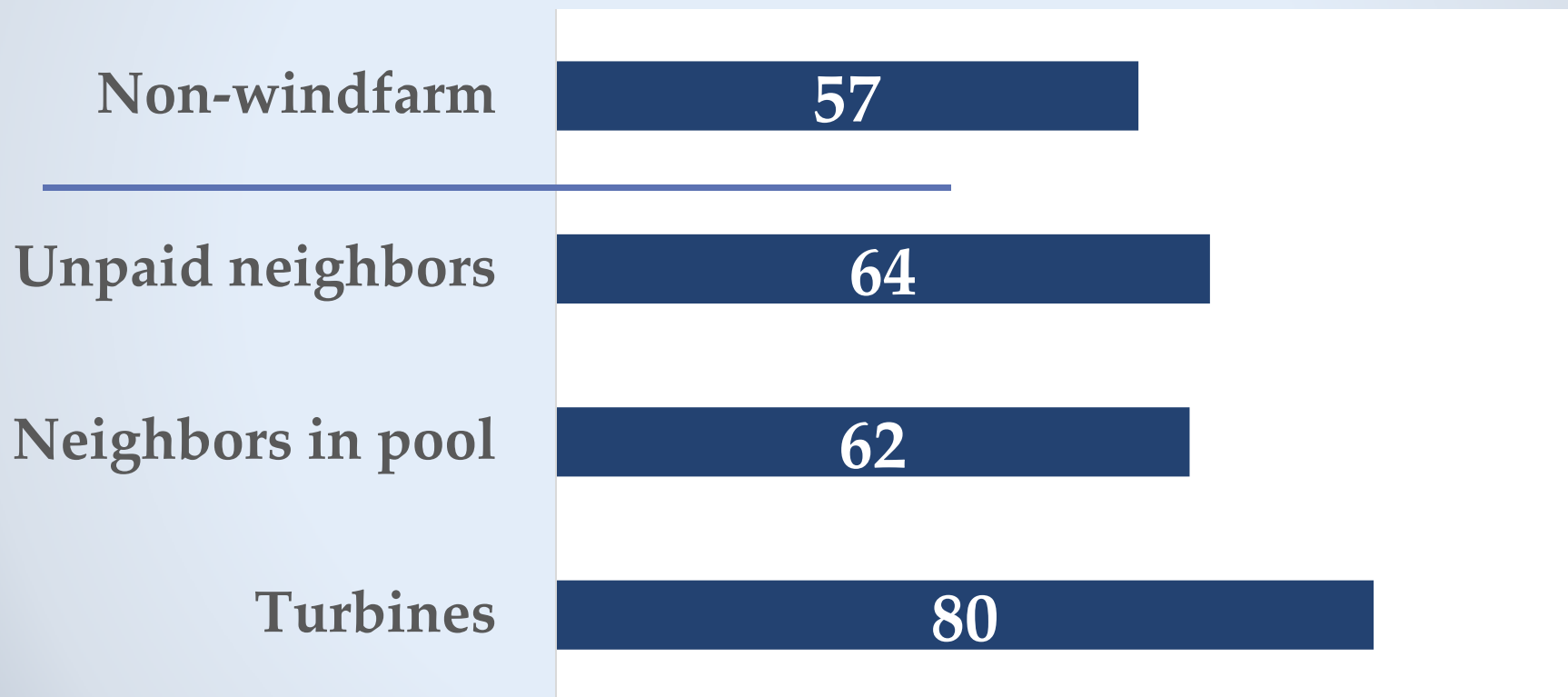
Farm Income

Investments over 5 years: 2009-2013



Farm Succession

% that have farm succession plan

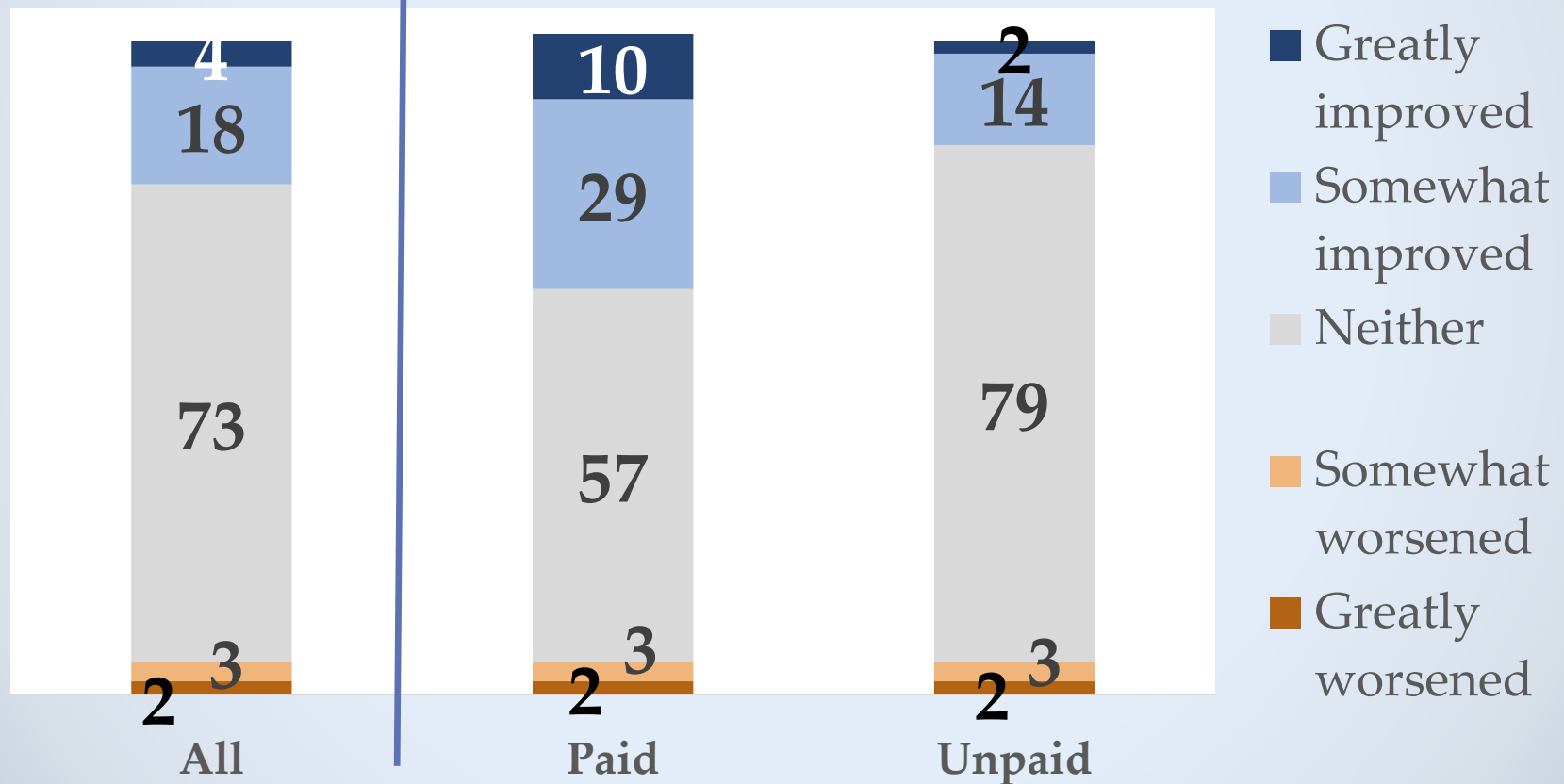


Land usage

- 1-2 acres for turbine + road
- Practically no impact if placed on property line
 - Avoids field tile
 - Rent for previously unfarmed fence row
 - Nothing to farm around
 - New lane for trucks

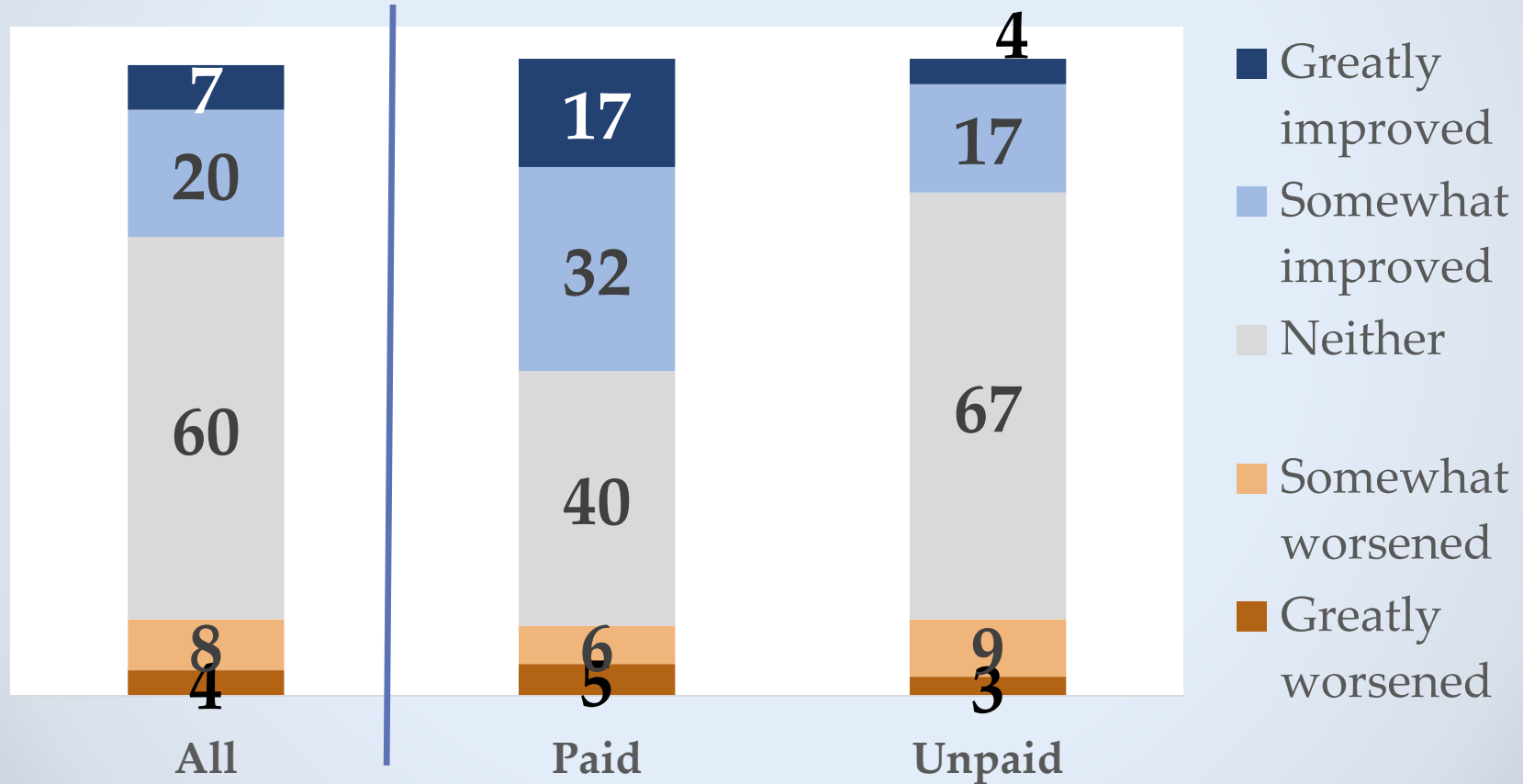
Tax benefits

Turbines' effect on township services



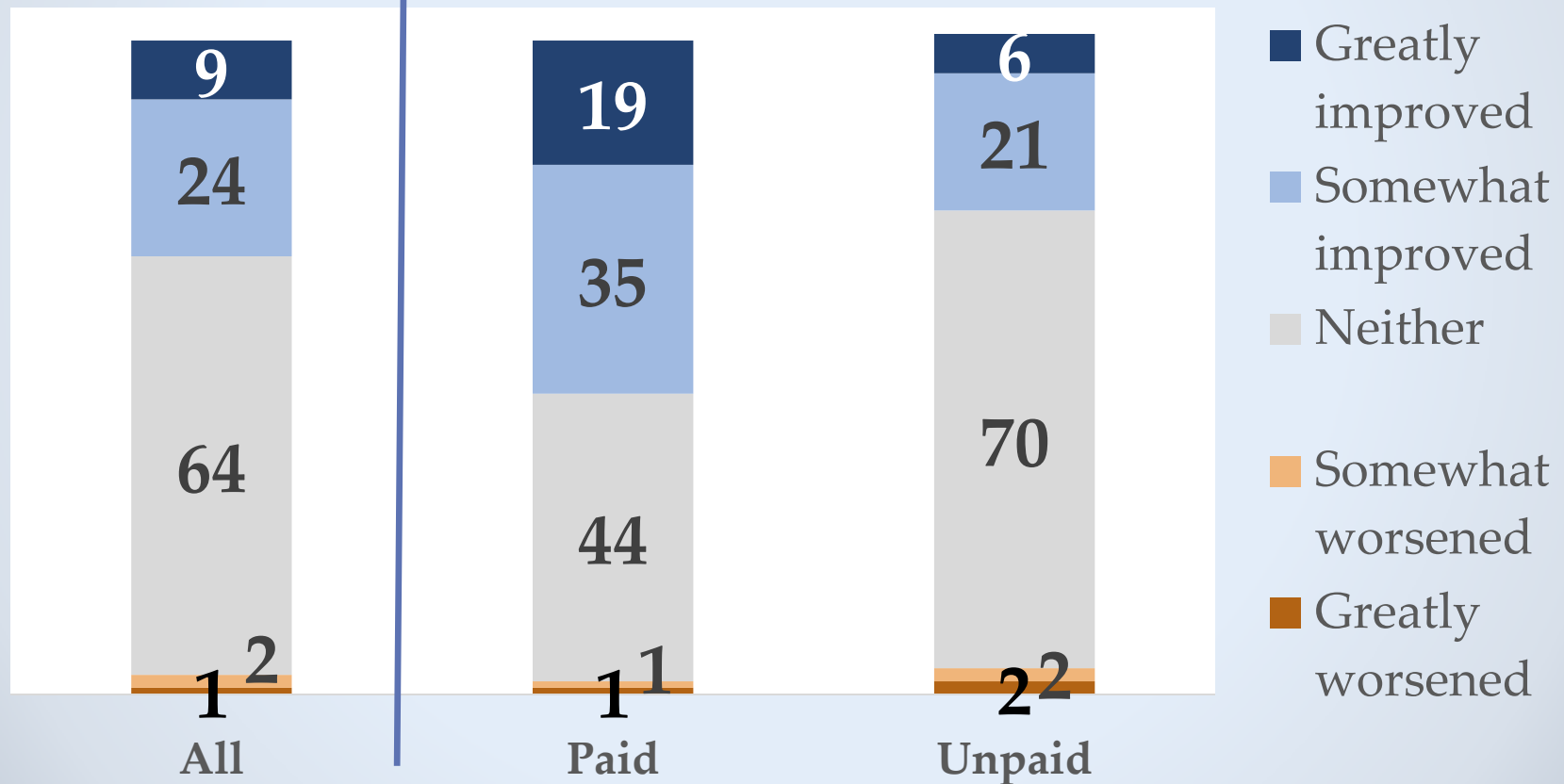
Roads

Turbines' effect on local roads



Local Schools

Turbines' effect on local schools

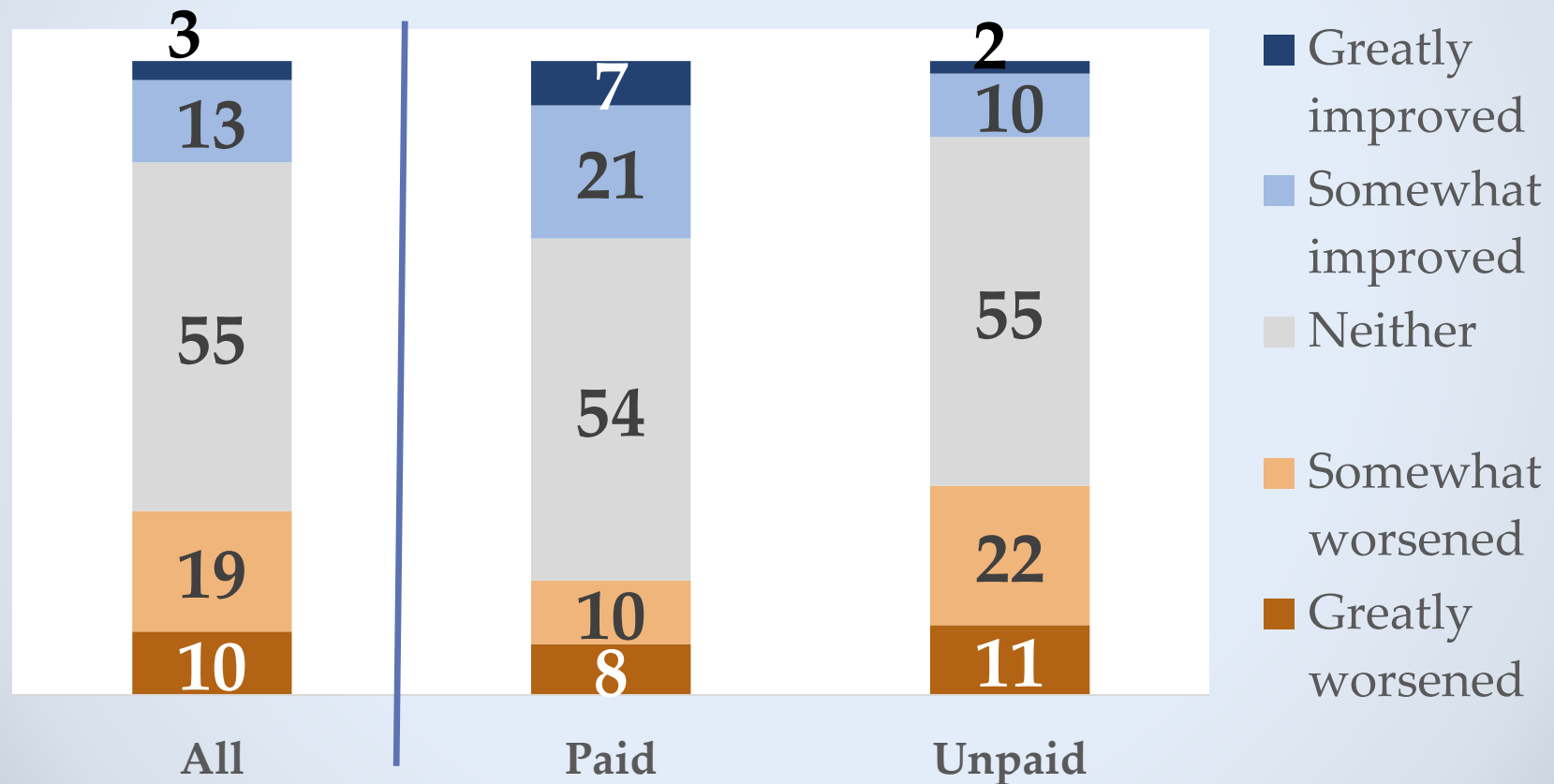


Take-aways

- Most opinions relatively evenly split
 - Financial stake = rosier view
 - No financial stake = more soured view
 - BUT STILL SPLIT OPINIONS
- Most don't see health impacts, changes in local services
- Most do see job creation benefits
- Key benefit is to farmers

How have turbines changed the community?

Turbines' effect on overall quality of life in township



My recommendations on zoning

- How does the fit with your township's 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
- Distinguishing between participating and non-participating landowners
- Be open & transparent



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