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ENERGY MARKETS & POLICY

Halfway up the ladder: Developer practices and perspectives on community engagement for utility wind and solar

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Please note…

- This webinar is being recorded and will be emailed to all registered participants and available within a few days at: https://emp.lbl.gov/publications/halfway-ladder-developer-practices
- You have joined in mute
- Use the Q&A button to ask questions. We will have time to address questions at the end.

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Background

Public response is increasingly shaping large-scale deployment

The New York Times

The U.S. Will Need Thousands of Wind Farms. Will Small Towns Go Along?

In the fight against climate change, national goals are facing local resistance. One county scheduled 19 nights of meetings to debate one wind farm.

Across America, clean energy plants are being banned faster than they're being built

Elizabeth Weise and Suhail Bhat USA TODAY

Published 5:18 a.m. ET Feb. 4, 2024 | Updated 2:28 p.m. ET Feb. 4, 2024

OHIO CAPITAL JOURNAL

COMMENTARY POLITICS & GOV HEALTH CARE EDUCATION CIVIL RIGHTS PUBLIC CORRUPTION

ENERGY & ENVIRONMENT POLITICS & GOV

Across the country, a big backlash to new renewables is mounting

Ohio is leading the way in the fight against renewable energy

BY: ROBERT ZULLO - FEBRUARY 15, 2023 4:50 AM

Existing literature lacks industry perspectives

- Substantial existing social science research on these topics:
  - Primarily, local stakeholders are the study subjects:
    - Surveys of project neighbors
    - Interviews with local leaders
    - Case studies of particular projects
- Perspectives of project developers are understudied.
  - Have extensive, cross-community knowledge and experiences
  - They play pivotal roles implementing community engagement
- First of its kind effort to survey developers regarding project development and community engagement

Methodology

Survey details

- **Web-based email survey** conducted in Spring 2023

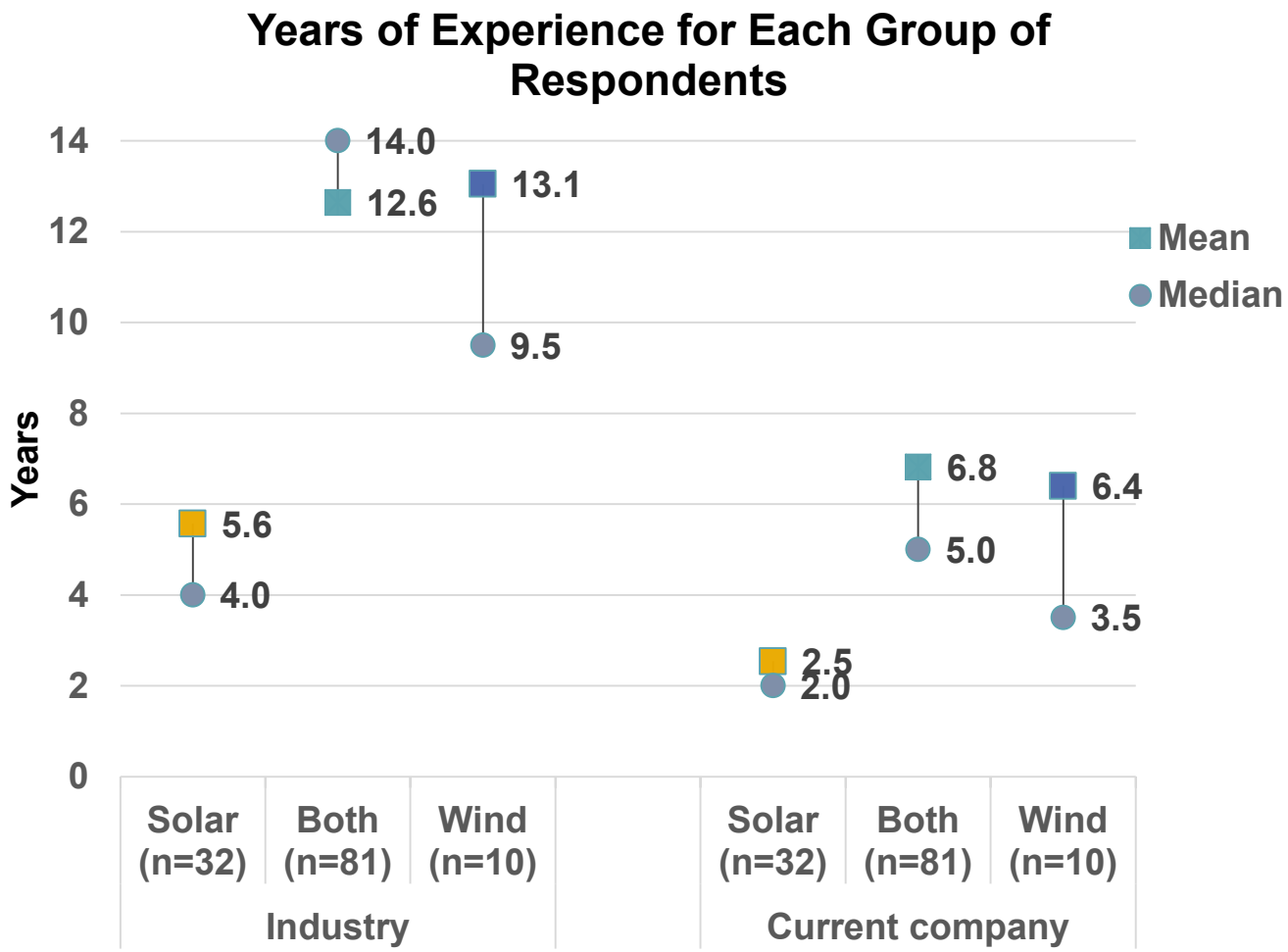
qualtrics XM

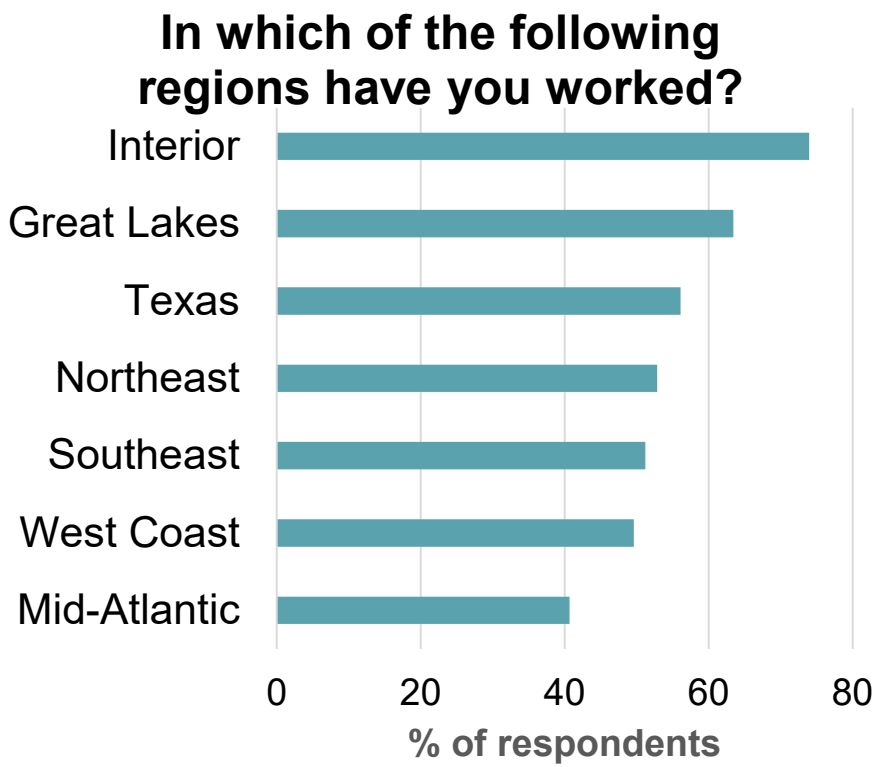
- Email addresses collected via:
  - Lists from industry partners:
    - American Clean Power
    - Solar Energy Industries Association
  - Personal connections, Linked In, etc.

- **123 respondents** (19.2% response rate)
  - **89 Solar**
  - **45 Wind**
  - *11 completed survey for both technologies*

- **62 unique companies,** representing approximately half of the wind & solar installed in the last 8 years

Experience of respondents



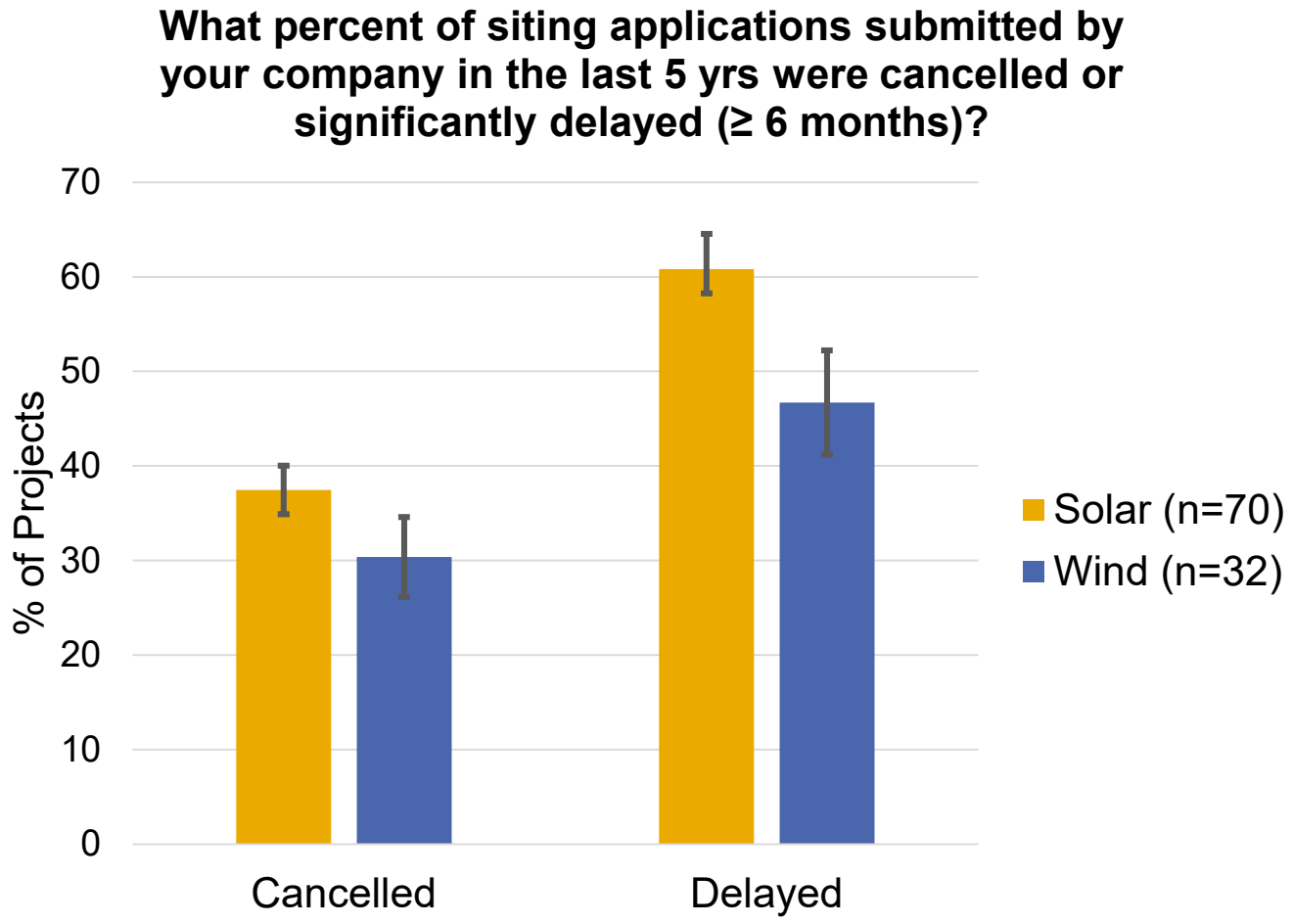


- ❑ **Average project size:**
  - ❑ **Solar ~ 150 MW**
  - ❑ **Wind ~ 250 MW**

Summary highlights

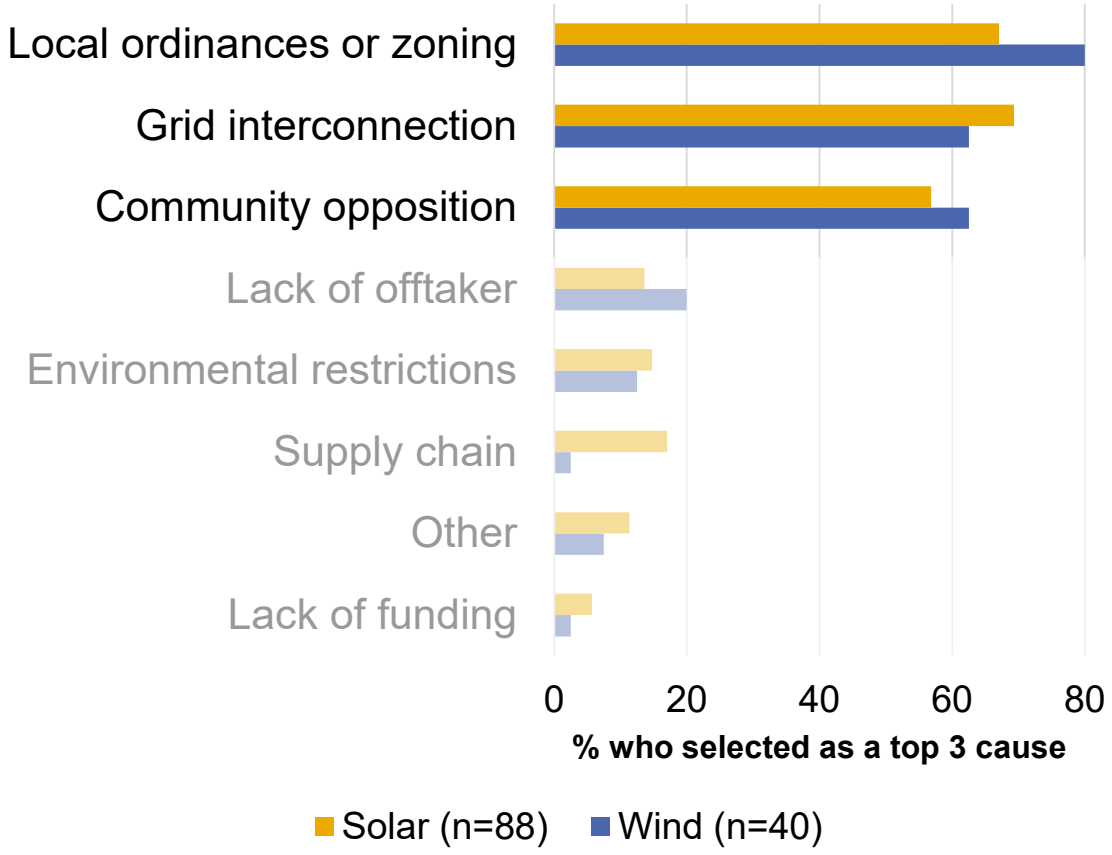
Both wind and solar are facing substantial timelines & risks of delays & cancellation

- Most projects take 4-6 years from a project's initial public announcement to commercial operations date.
  - About 20% report most projects take more than 6 years.
- About half of projects experience significant delays and at least 30% are cancelled

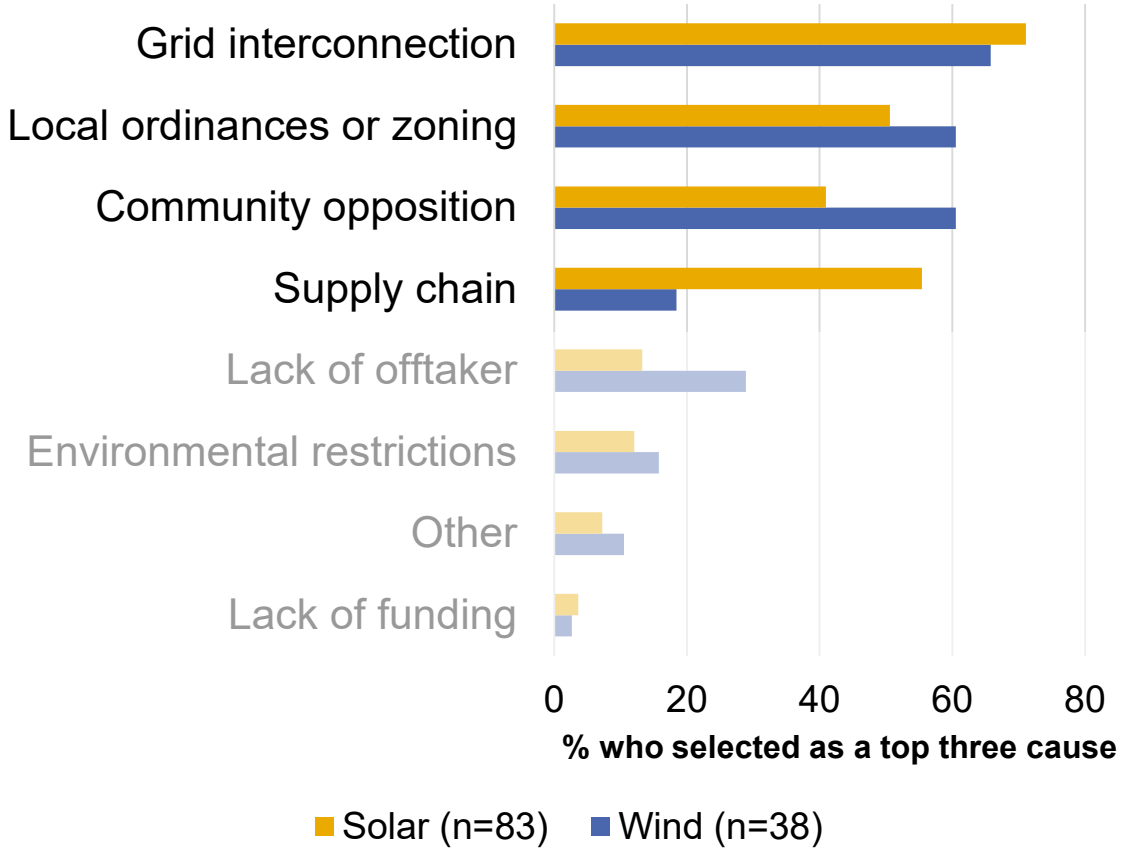


Local ordinances, interconnection, and opposition are reported leading causes of cancellation and delay. Additionally, supply chain has led to many solar delays.

Leading causes of solar project cancellation in last 5 yrs

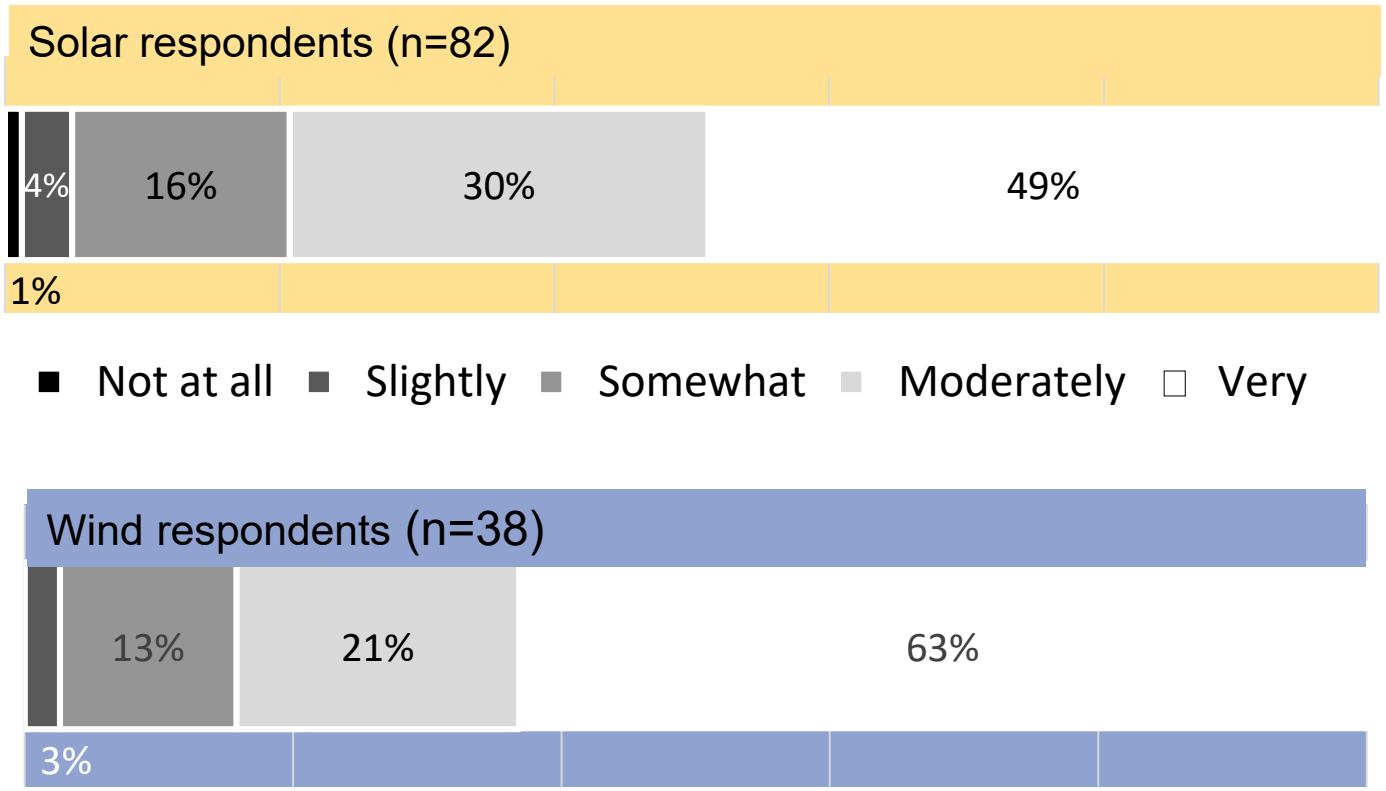


Leading causes of project delays of 6 months or more in last 5 yrs



Developers expect community opposition to be detrimental to decarbonization goals.

How much do you think community opposition will get in the way of decarbonization goals?

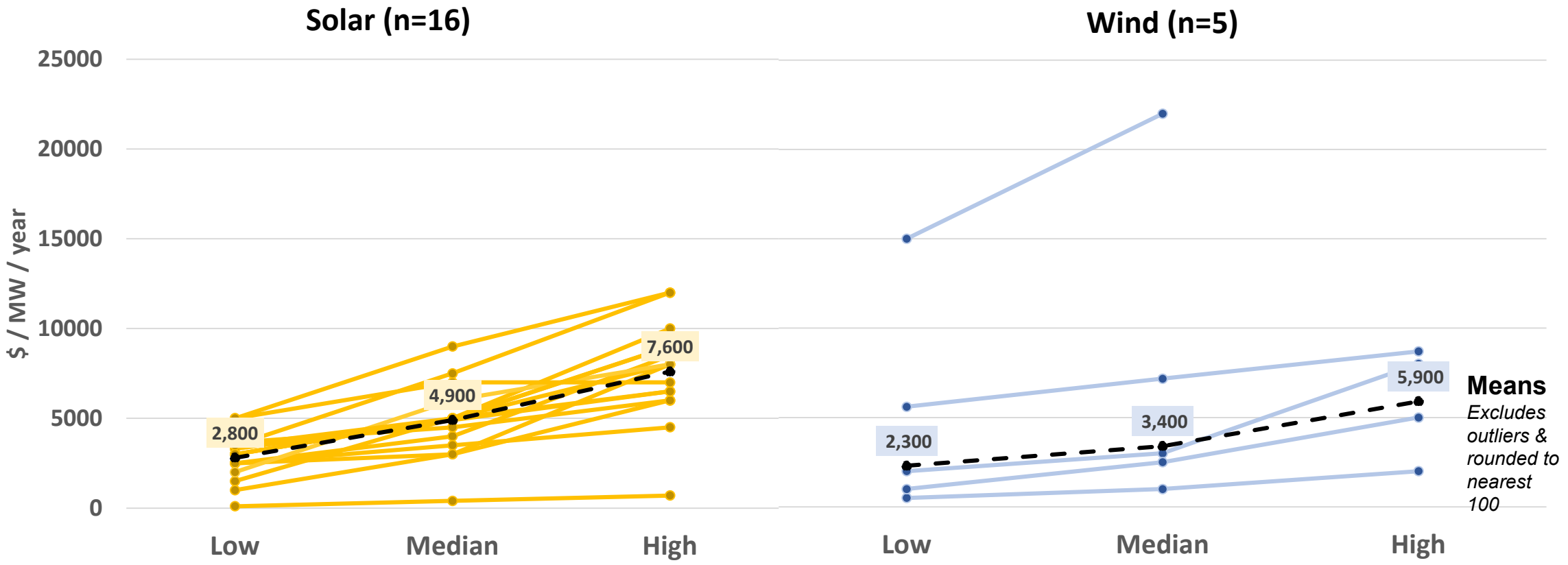


"Community acceptance and local permitting is one of, if not THE, biggest challenge to widespread decarbonization. We need all the attention we can get across government to support us on the ground."

- Solar developer

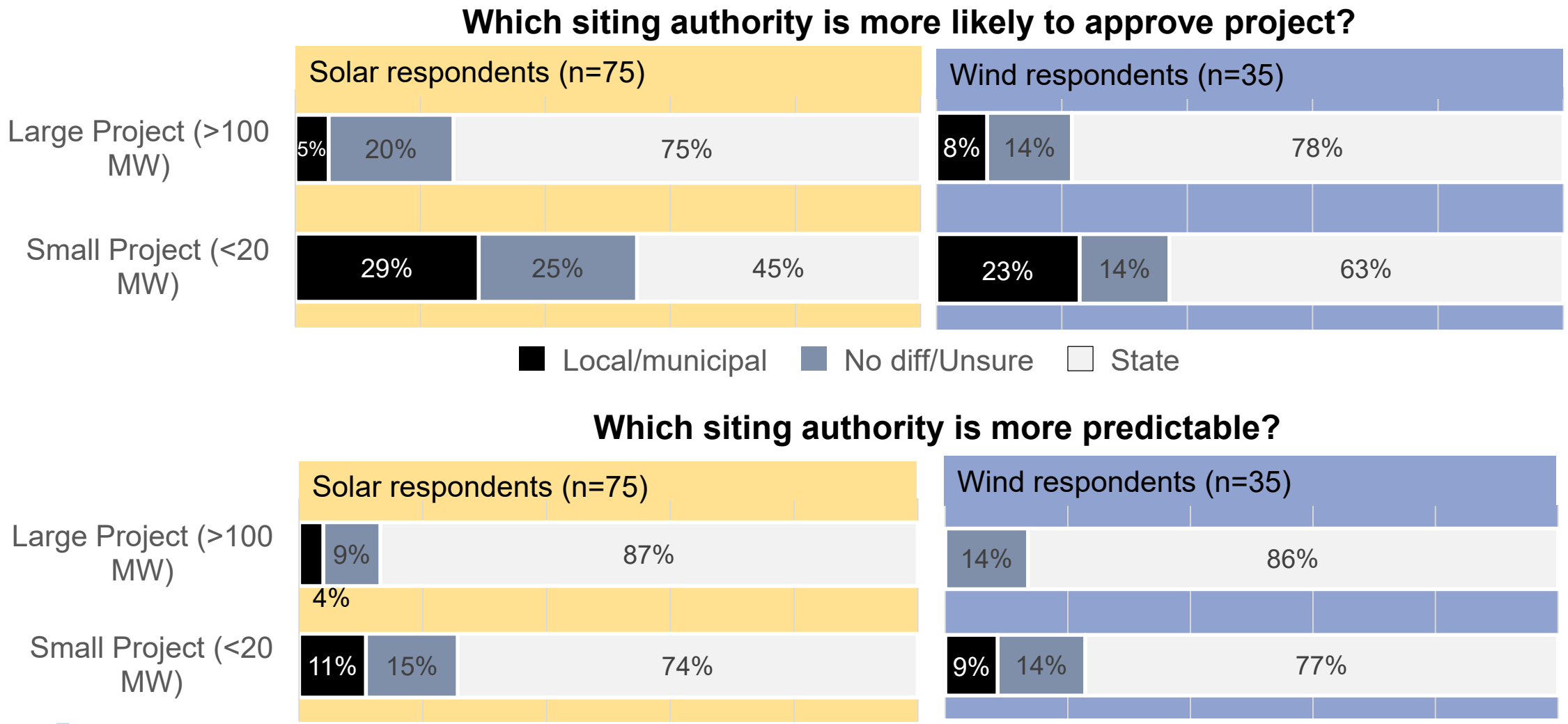
Payments to host communities are similar for wind and solar, however vary considerably between different projects of the same company

Please provide an estimate of the lowest, median, and highest rates paid to host community (e.g. in tax or PILOT agreements)



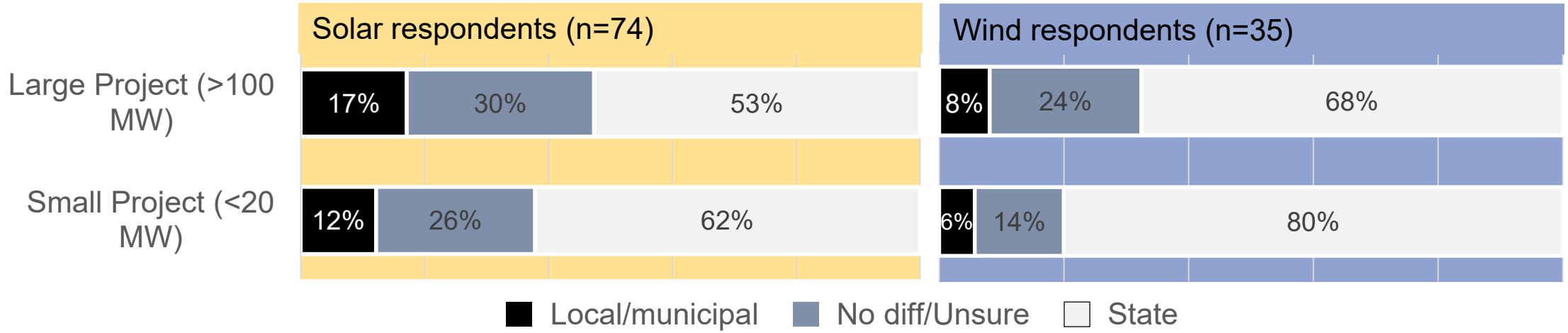
Each dot represents a reported low, median, or high rate. Each line connects the rates of a single respondent.

State siting authority is expected to be more likely to approve projects and more predictable for both technologies and project sizes

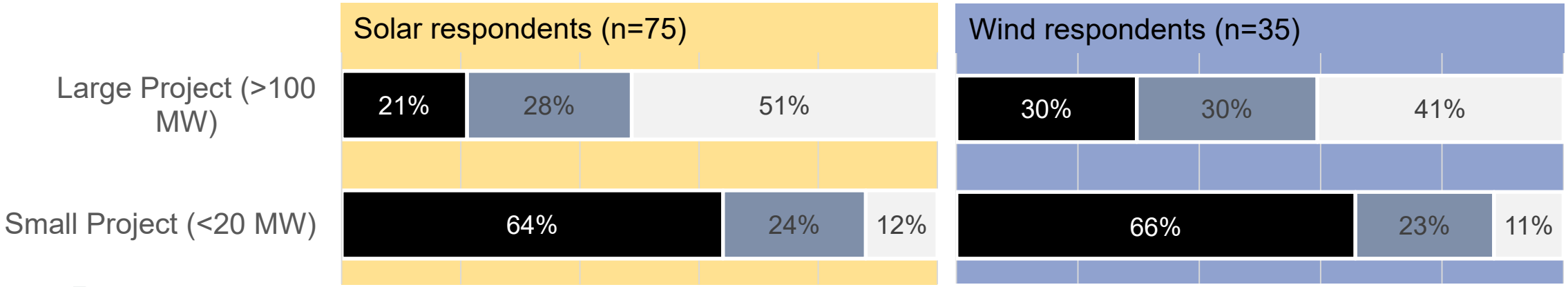


Most respondents agree that state siting authority is more expensive, while efficiency depends on project size – local authority is often more efficient for small projects.

Which siting authority is more expensive?

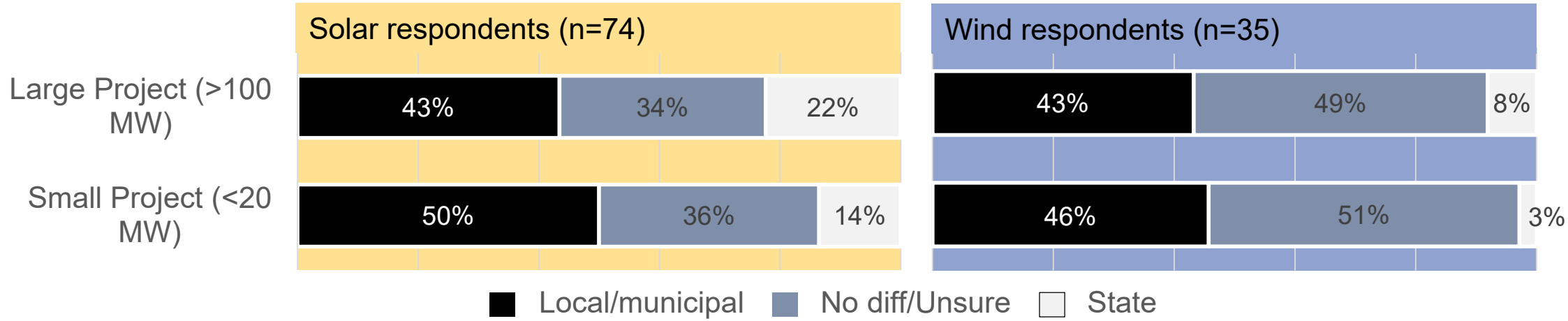


Which siting authority has more efficient timeline?

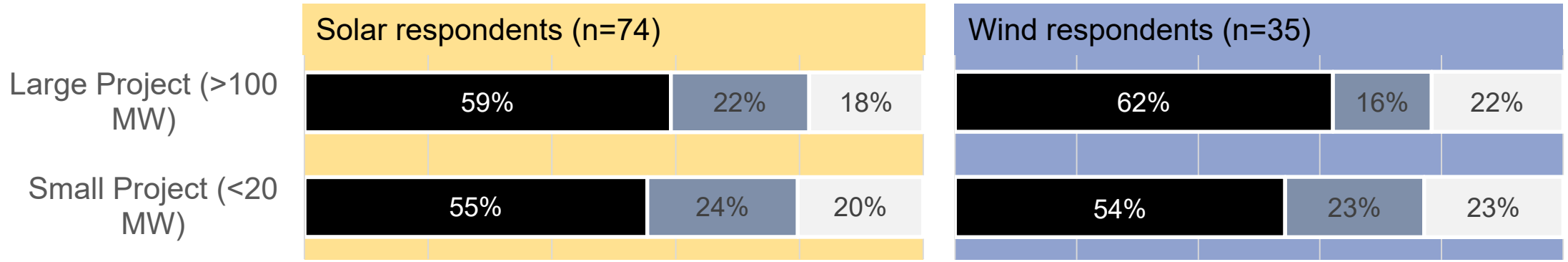


More respondents expect local siting authority to result in greater net benefits to a community and lead to more community opposition

Which siting authority results in more net benefits to the community?



Which siting authority leads to more community opposition?



ENERGY MARKETS & POLICY

New paper:

Theoretical framework

Just transition and energy democracy

Common principles

- Recognize current energy system **intentionally** creates uneven distribution of environmental harms & benefits
  - Global South, people of color, low-income communities

- Advocate for transition to renewable-energy based system **while at the same time attending to social justice**
  - **Using the same processes of the extractive economy would reproduce existing inequities**

(Wang & Lo 2021; Anderson & Johnson 2024; Newell & Mulvaney 2013; Burke & Stephens 2017; Walker et al. 2023)

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Ideal versus reality

Procedural justice

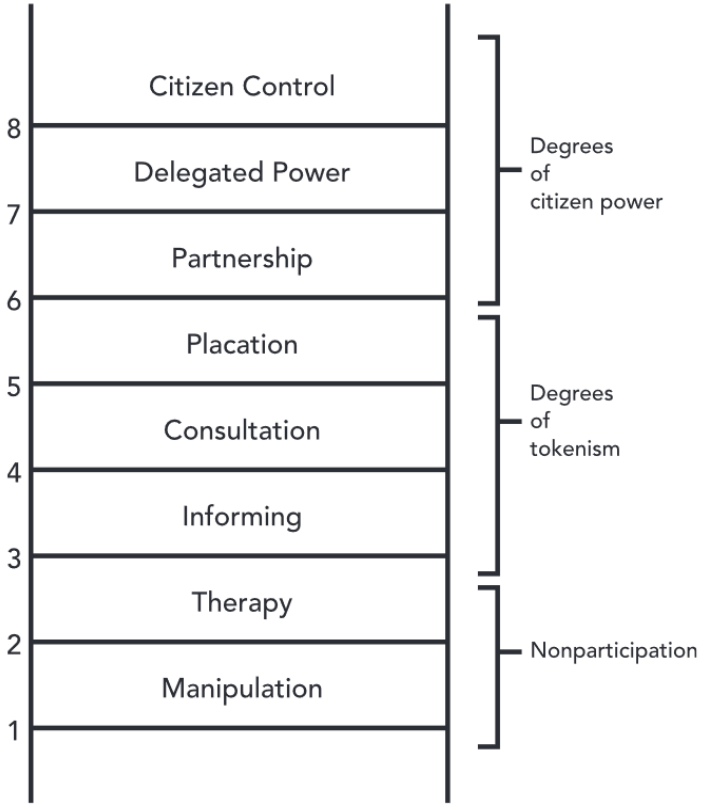
- Principles (Jenkins et al. 2016; Sovacool & Dworkin 2015)
  - Adequate access to transparent information
  - Inclusion of local knowledge in decision-making
  - Meaningful impact on decisions
  - Absence of bias
  - Appropriate legal avenues to address grievances
- Moral motivation: Public inclusion as a fundamental human right

Current practice

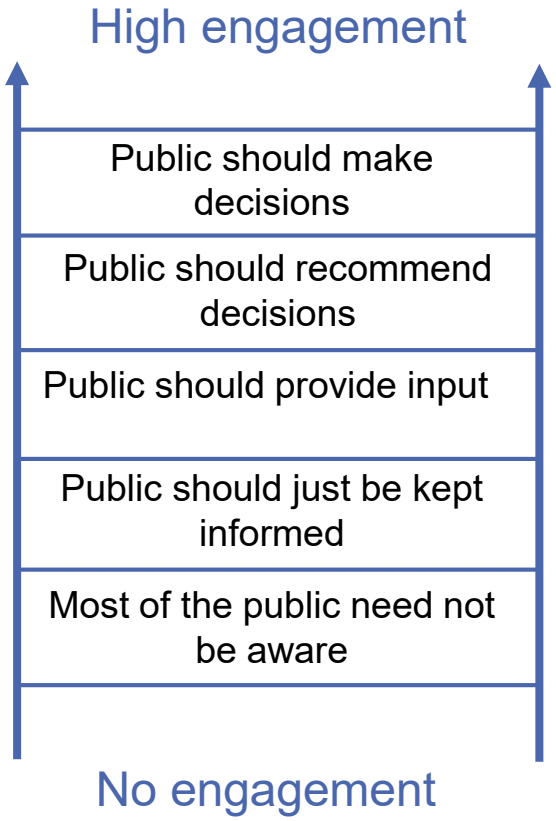
- Decide-Announce-Defend (Bell et al. 2005)
- "Private participation" (Jacquet 2015)
- Instrumental motivation: Public engagement occurs to the extent that it will help acquire siting permit (Ryder et al. 2023)

Characterizing engagement: Applying Arnstein's ladder to renewables

Arnstein's 8-step Ladder



Modified 5-step Ladder



Examples

Ballot referendum, community ownership

Working groups create specific project recommendations

Oral testimony or written comment submission

Brochures, information sessions

Minimal / no effort to inform public

Research objectives

- Better understand current experiences with community opposition.
- What engagement practices are developers currently using?
- What is the impact of that engagement on project planning and design?
- Better understand how developers think the public should be engaged.
  - *Based on the Modified Arnstein's ladder*

Solar developers host a public open-house in a firehall in Caledonia, NY

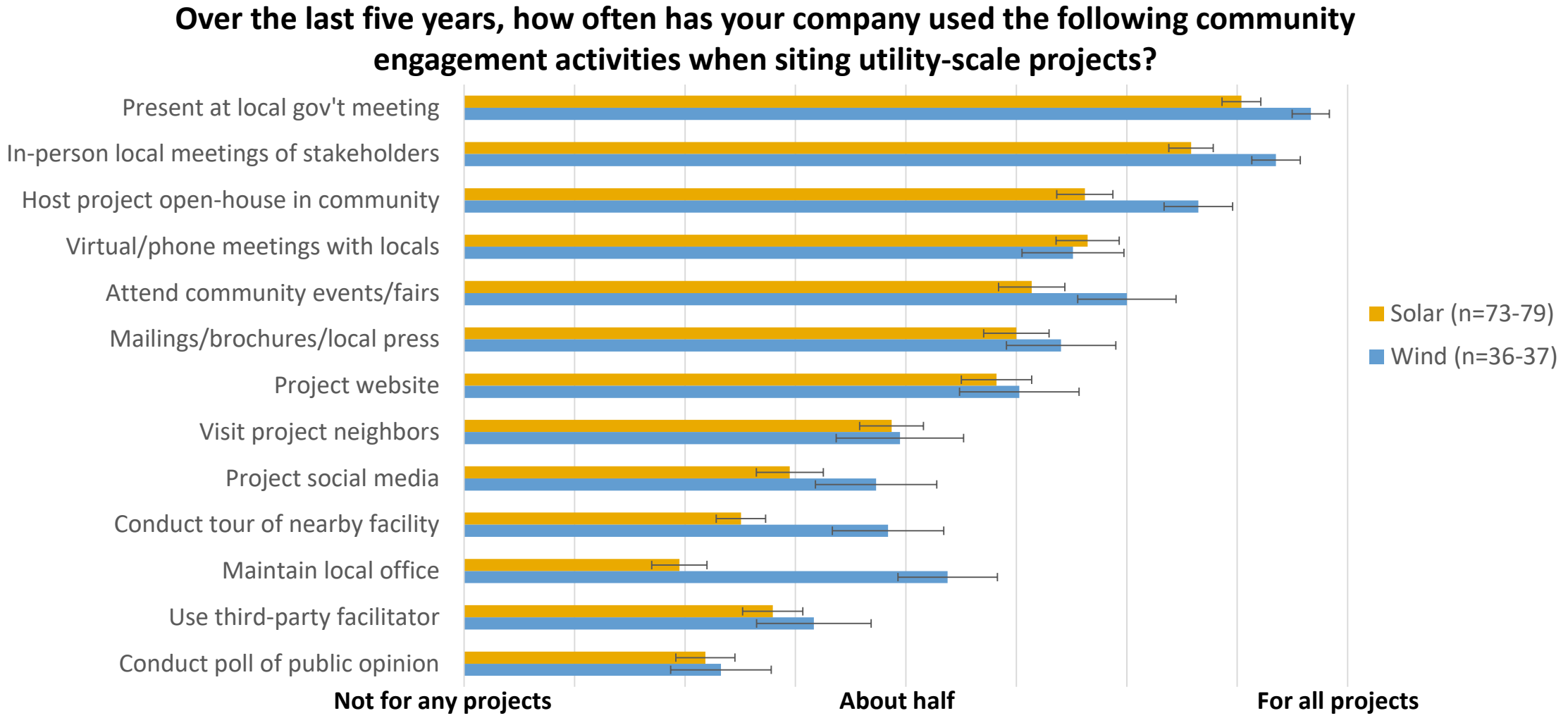
Findings

Trends in community opposition

- For both wind and solar, opposition is becoming **more prevalent** and is **more expensive** to address than it was five years ago.
  - Most developers expect this trend to continue, becoming even **more prevalent in the next five years**.
- 95% report that opposition is often caused by a **vocal minority**.
- Most also agree that **larger projects** are more likely to encounter opposition.
- Developers may avoid communities where they expect opposition, but it can be **difficult to predict**.
- About half report that opposition is more often **driven by outsiders**, and that opposition is **more likely in mid to high income communities** than low income communities.

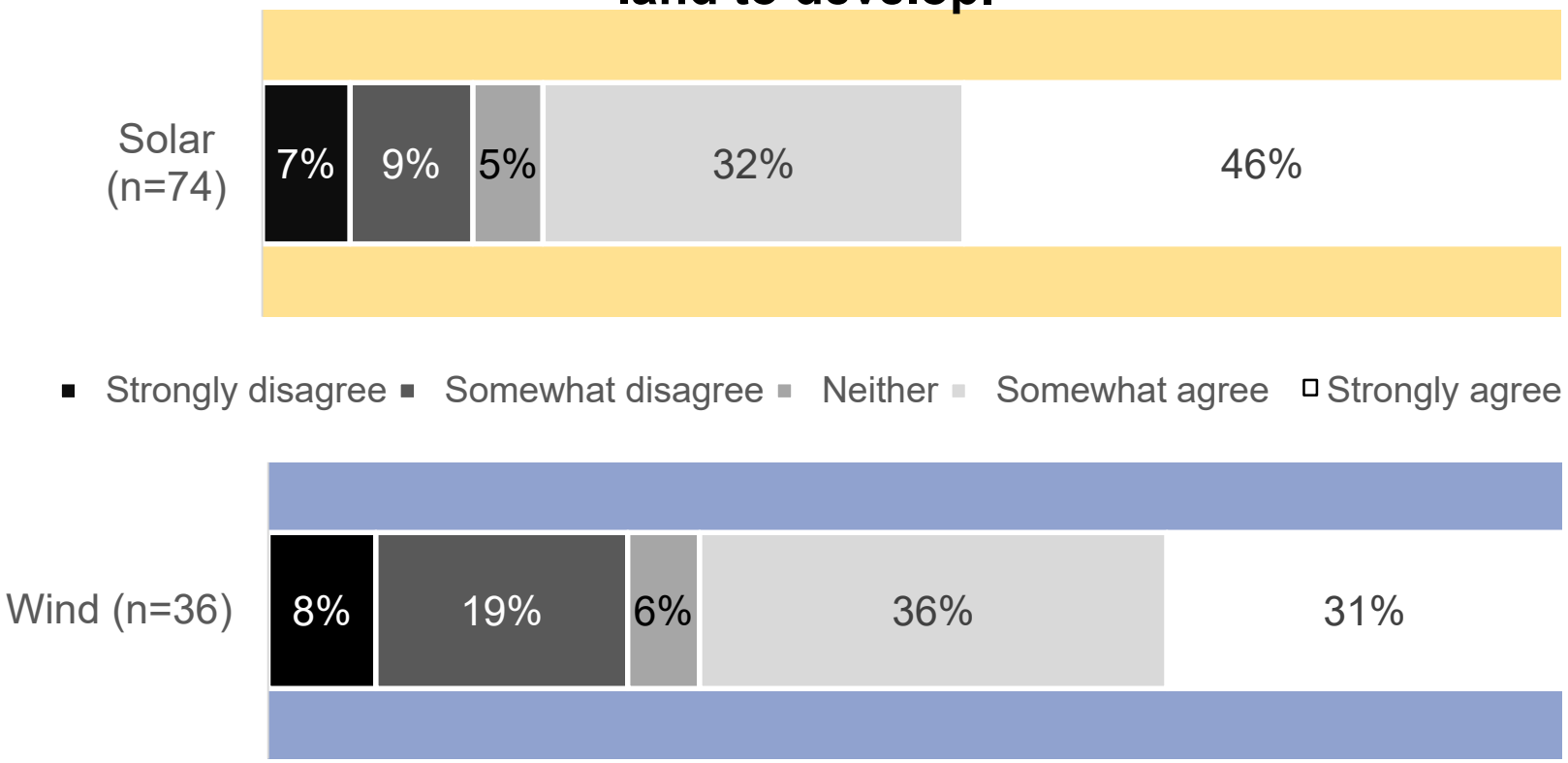
Community members formed a concerned citizen group about the proposed hybrid facility in Kennewick, WA
Photo from tricitiescare.org

Developers use many engagement strategies, most often local meetings and presentations



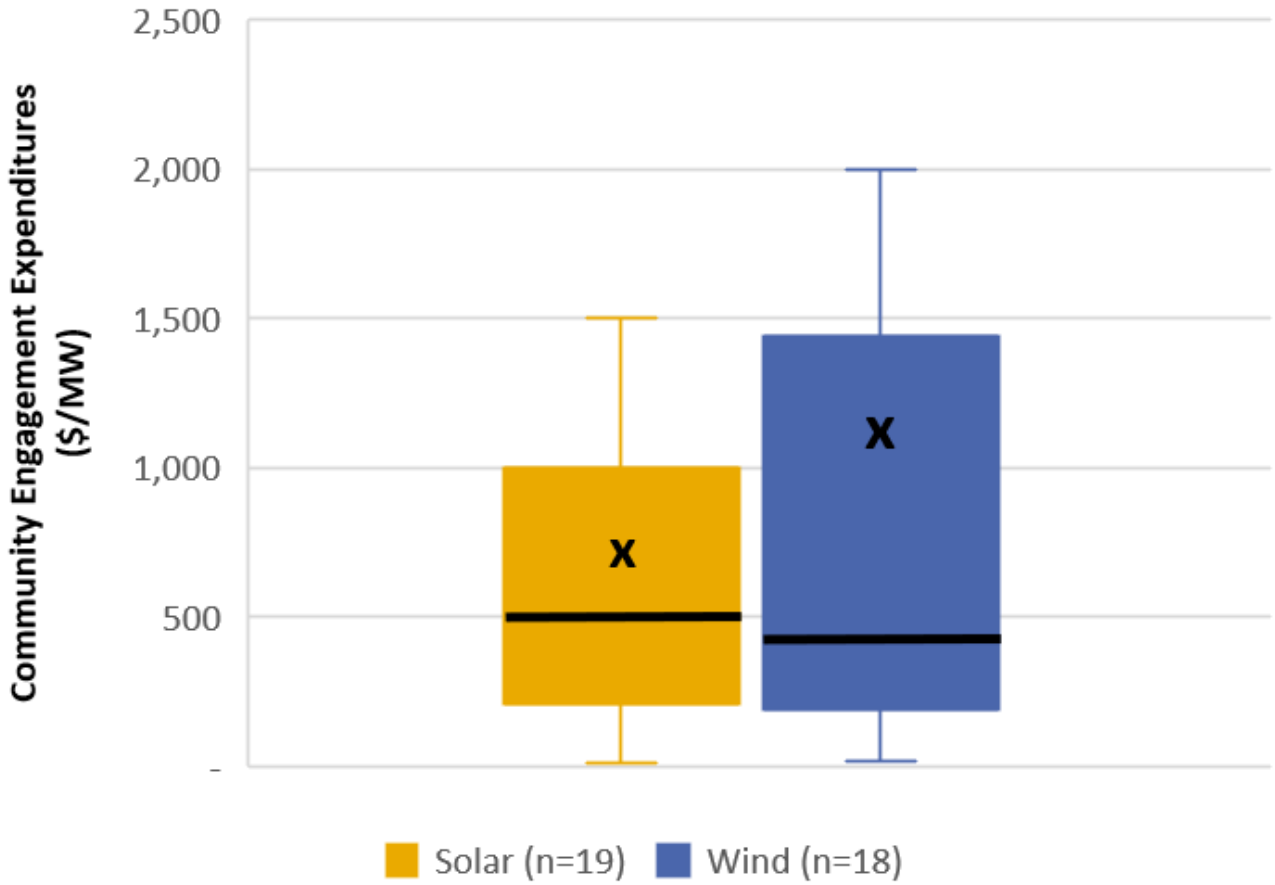
Public announcement usually comes after site control

Typically, we wait to announce a project in a community until we know we have secured enough land to develop.



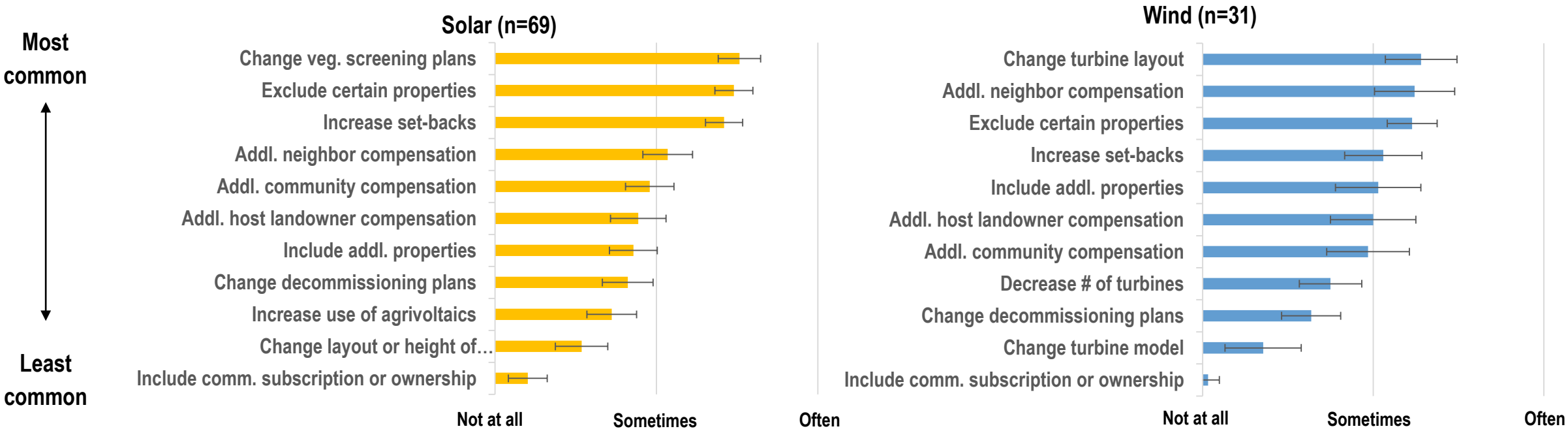
"There is always concern about the community finding out about a potential project before you make an announcement."
-Wind & Solar developer

Reported community engagement expenses represent less than **0.1%** of typical CapEx



Developers report integrating community feedback into many aspects of project design, but some changes are more common than others.

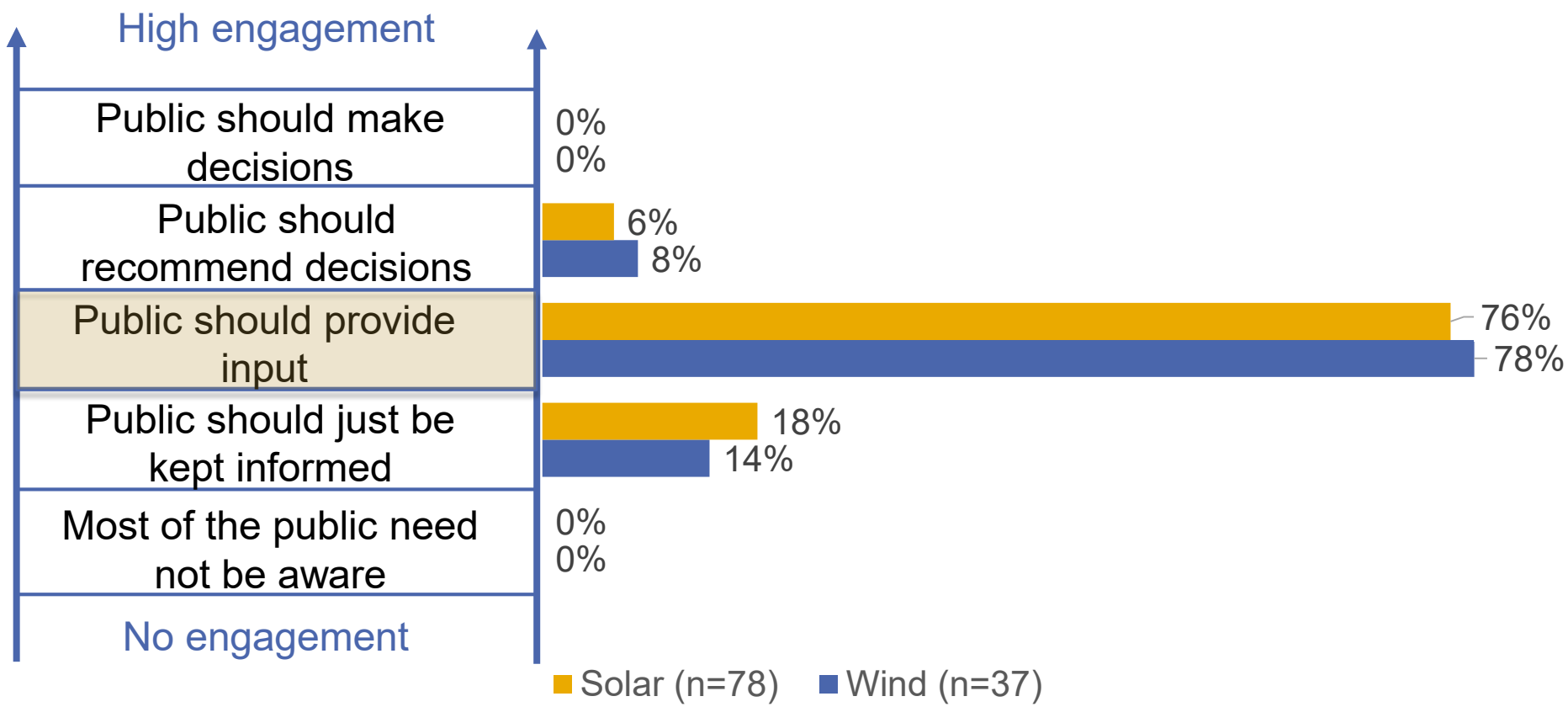
How often does your company make each of the following changes in response to community feedback?



Error bars indicate 95% confidence interval of the mean.

Most developers envision the best role of the public is to provide input, but not to make or recommend project decisions

Which is the most appropriate way to engage members of the public in decisions about utility-scale projects proposed in their community?



Themes regarding barriers to engagement

1. Misinformation & organized opposition
   - Developers not trusted source of info and some described engagement as an uphill battle

2. Combination of regulatory barriers and lack of industry buy-in
   - Some emphasized systems not set up for options like bill discounts or community ownership
   - Others indicated lack of interest

3. Economics & financing
   - Thin profit margins
   - Lack incentives

"Generally, developers feel this is a ridiculous proposition, even without looking at the cost."

"Projects need to be economically competitive with projects in the surrounding area. If one county or municipality is going to require higher taxes, their projects will not be competitive."

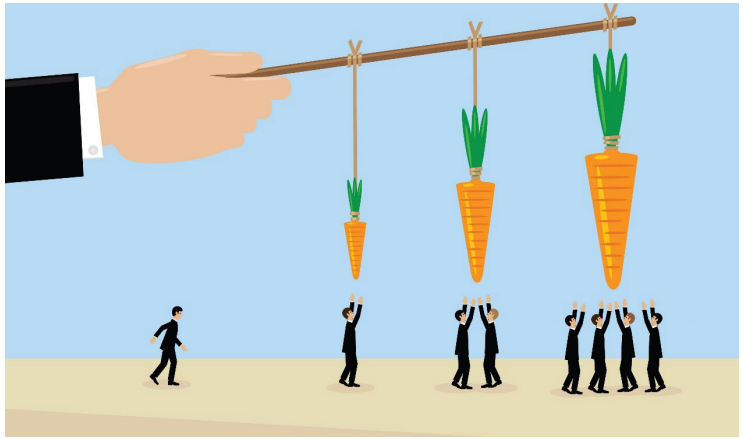
Discussion

Discussion & Implications (1)

- Community opposition is a key consideration in siting
- D-A-D remains predominant practice, and industry spending on engagement is minimal
- Developers motivations for engagement are instrumental
  - Mode to acquire social license to develop, not a tool for achieving justice
  - Market-based rationality does not reward engagement for moral reasons
- How can community engagement help?
  - More research is needed about which particular strategies work best
  - This could give developers more confidence to adopt new strategies or invest more in engagement

Discussion & Implications (2)

- Procedural justice relies on trustworthy information sources
  - Many developers admitted they are not considered trustworthy
  - Suggests increased potential for neutral third-party facilitators
    - Identify existing trusted information providers in communities
    - Augment capacity of existing local leaders
- To more directly address justice & equity, further structural reforms would be necessary
  - Previous research suggests shared decision-making or profit-sharing might improve equity outcomes
- Related work:
  - Local officials survey will shed additional insights on local capacity
  - DOE's R-STEP program will provide technical assistance for planning for renewable energy to state and local programs



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Summary & Result Deck: https://emp.lbl.gov/publications/survey-utility-scale-wind-and-solar

"Halfway up" article: https://emp.lbl.gov/publications/halfway-ladder-developer-practices

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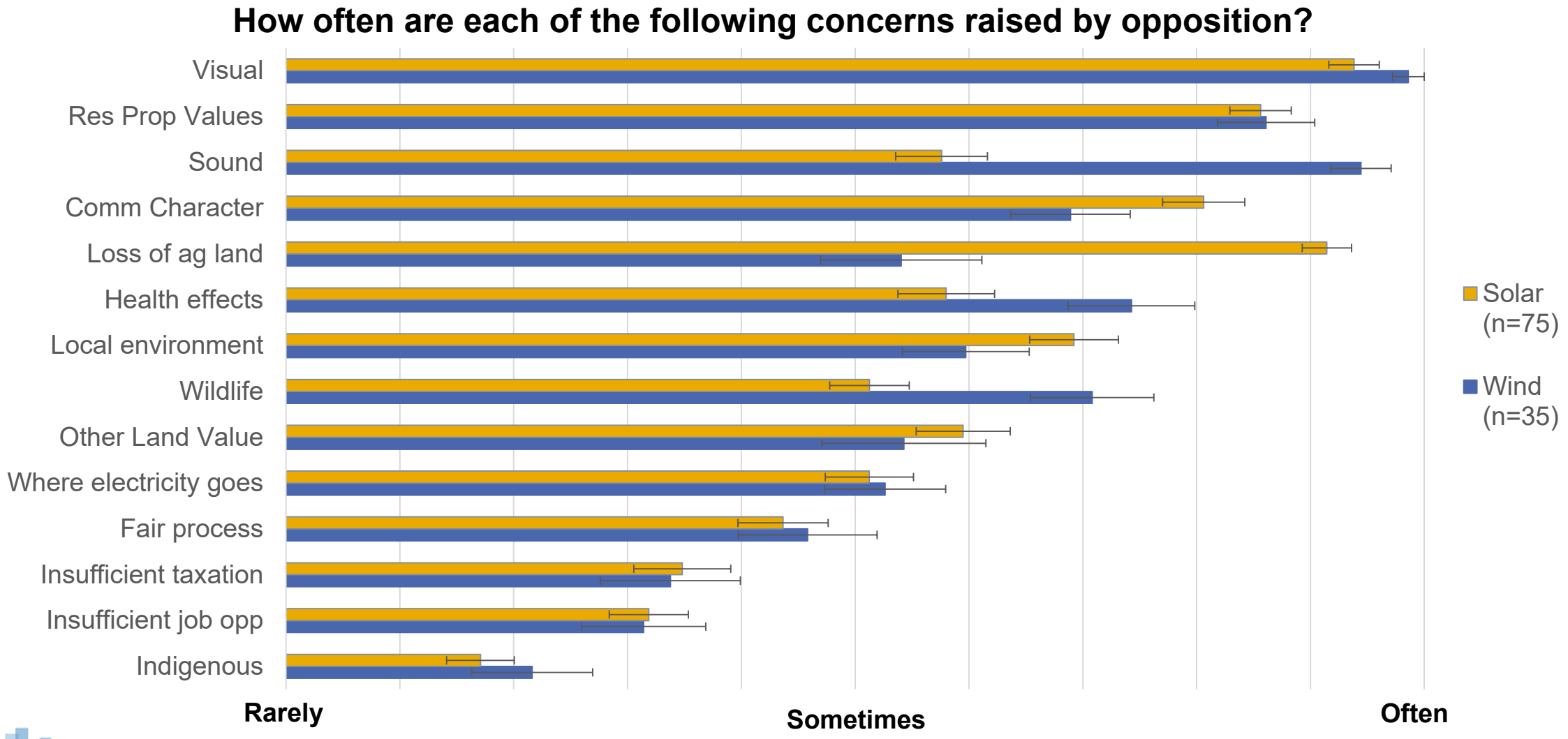
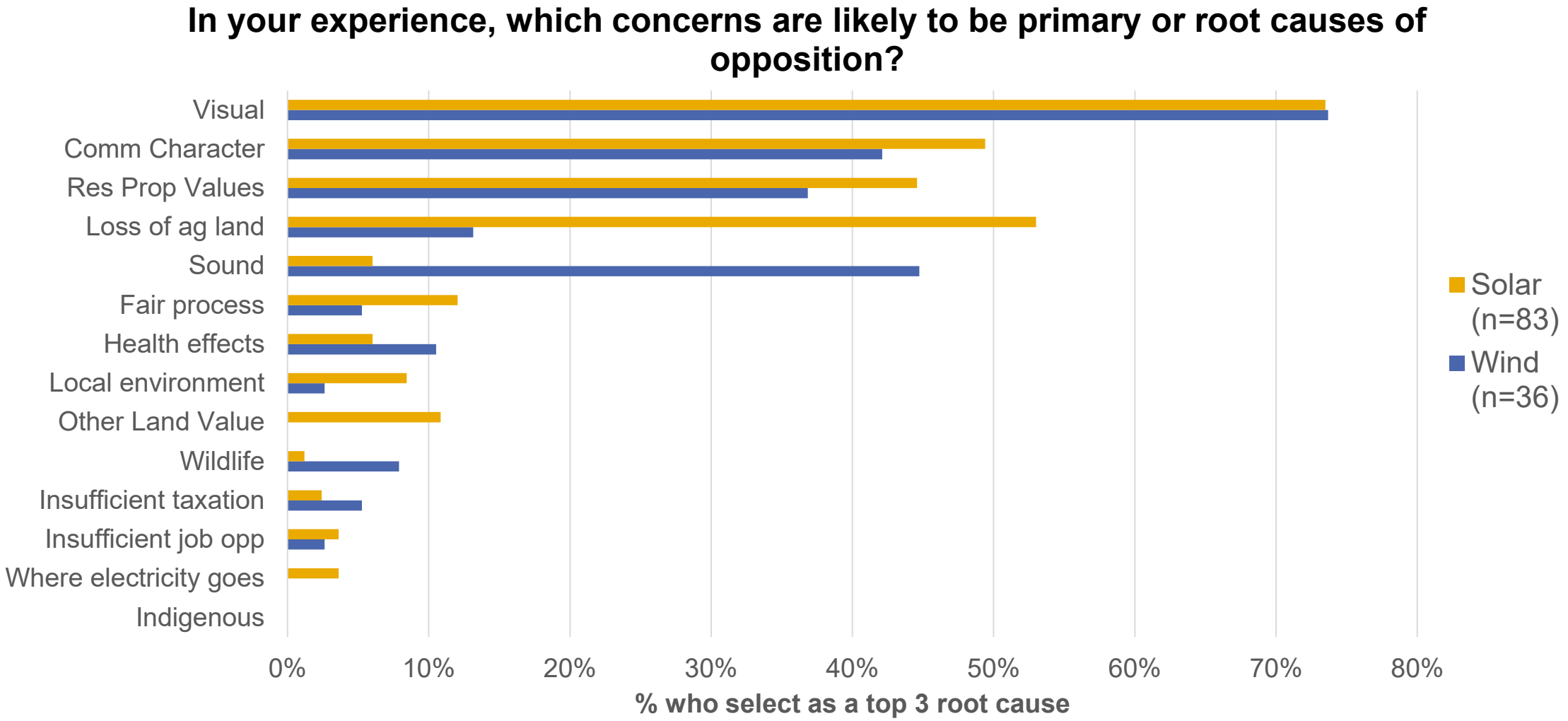
Appendix

Developers report visual concerns to be the most common for both wind and solar, followed by sound for wind and loss of farm land for solar



Developers do not expect many of the concerns raised to be root concerns of opposition (e.g. fair process, job opportunities, taxation)



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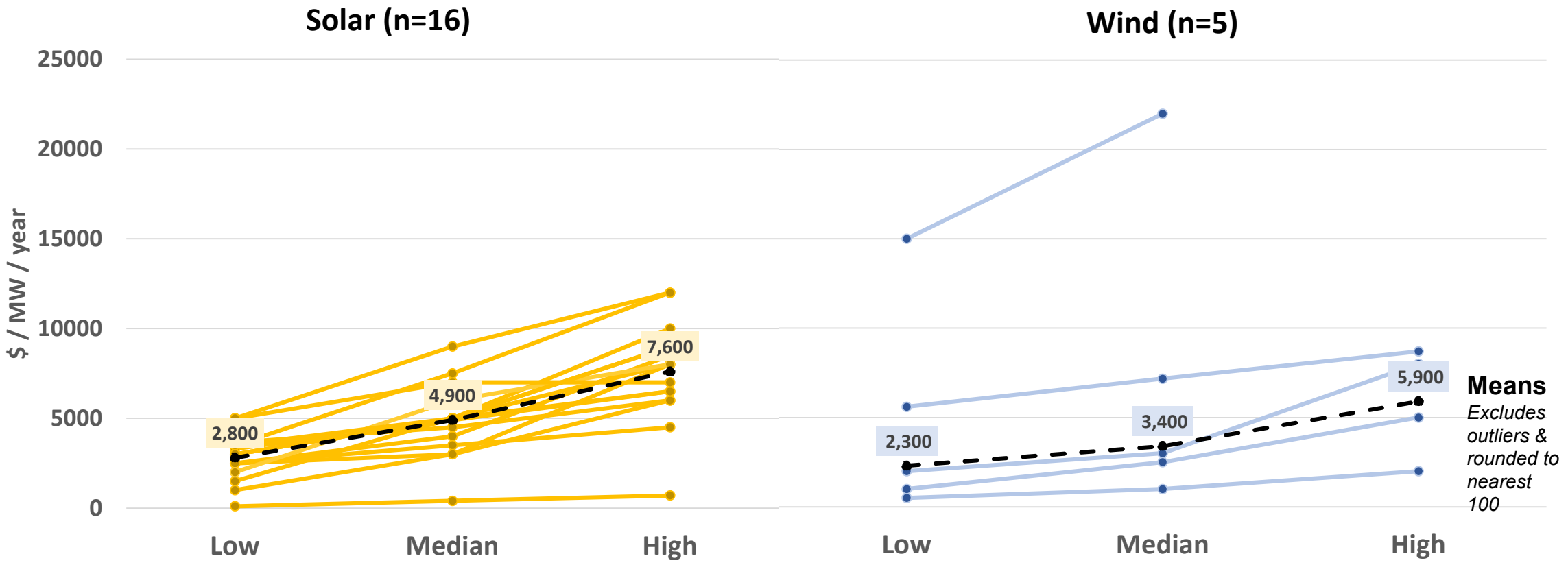
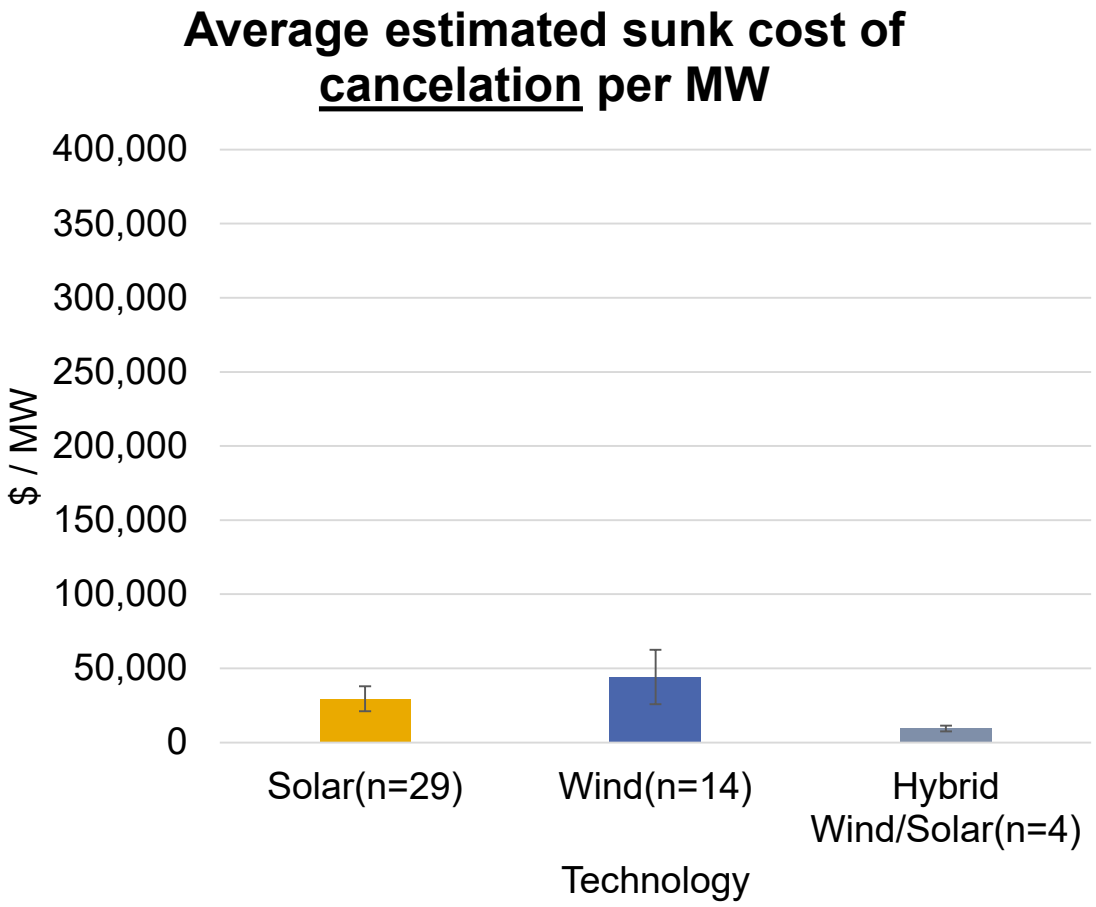
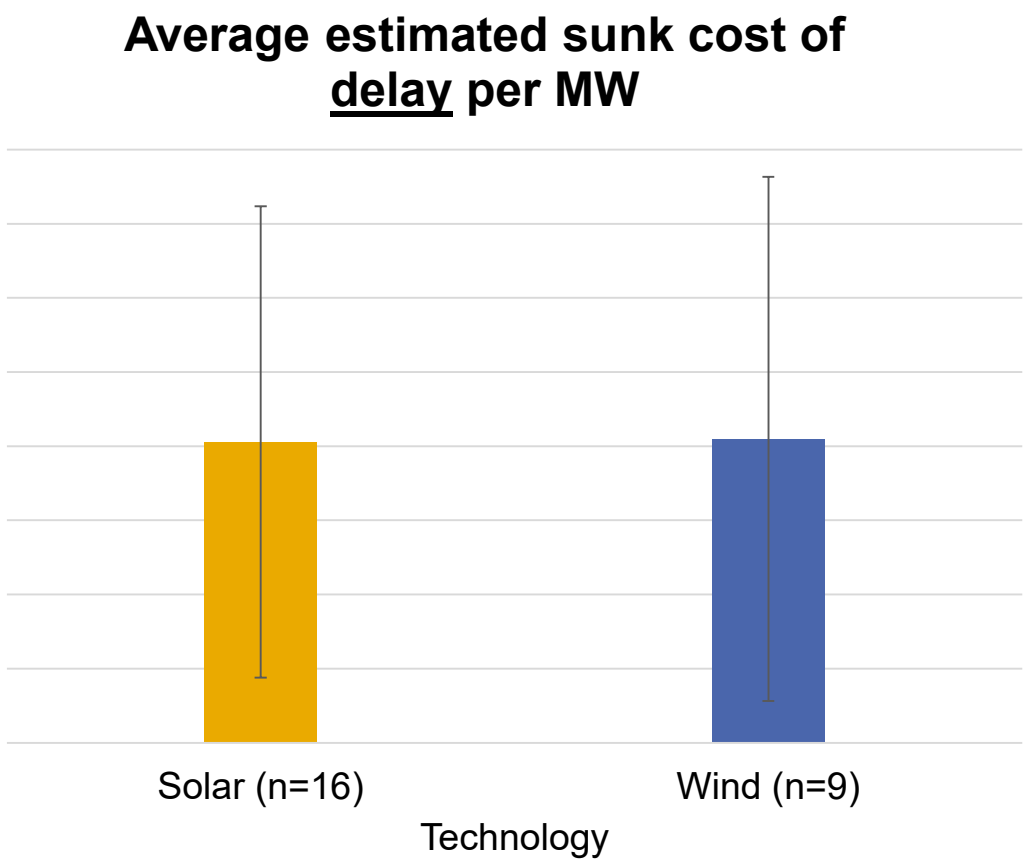


Each dot represents a reported low, median, or high rate. Each line connects the rates of a single respondent.

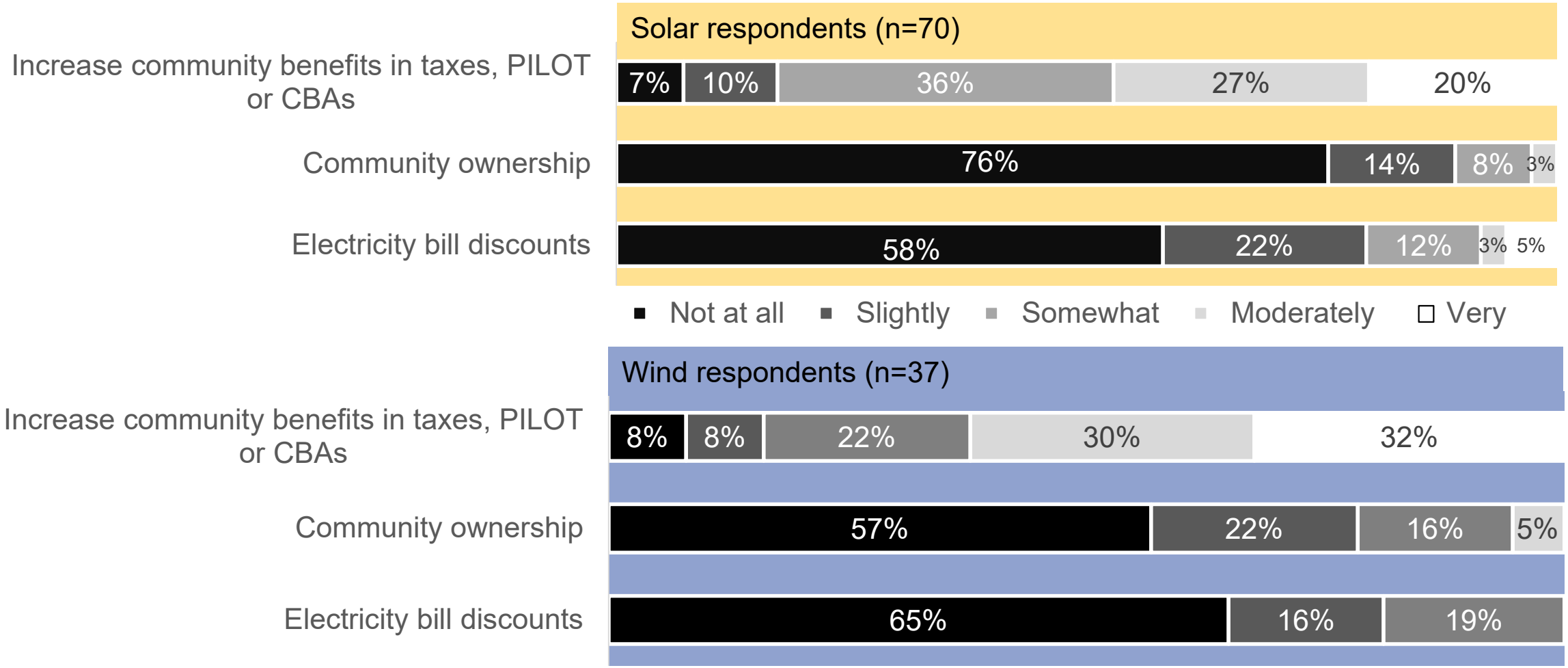
Delays can be more costly than cancelations because they often occur at later stages of development





According to developers, community ownership and electricity bill discounts are not very feasible, while increasing community benefit payments are somewhat feasible

How feasible are these recommendations?



Structural barriers and project finances are dominant reasons that community benefits do not increase

Electricity bill discounts

- About 80% think it is not at all or only slightly feasible
- Majority reference **<u>regulatory, logistic or policy barriers.</u>**
  - "*We have to do it in New York though. But it's prescriptive and set by law*."
- 4 respondents questioned why:
  - *"There is a lack of knowledge of the conveyance or mechanism to provide those discounts, and there is not enough internal buy-in to pursue a better understanding of how this would work.* ***Generally, developers feel that this is a ridiculous proposition, even without looking at the cost****."*

Community ownership

- Over 80% think it is not at all or only slightly feasible
- Most reference **<u>financing</u>**:
  - Communities do not have the capital or credit history to participate
  - Communities could not monetize the tax credits (changing under IRA)
- Solar respondents were more likely to also reference thin profit margins, which make additional community compensation infeasible
- Would require policy change:
  - "*But we do it in Canada sometimes*."

Increase community benefits in taxes, PILOT or CBAs

- About 17% think it is not at all or only slightly feasible
- Two-thirds of respondents mention **<u>project finances & competition</u>**
  - "*Projects need to be economically competitive. If one county/municipality is going to require higher taxes, their projects will not be competitive with projects in surrounding areas."*
- 4 respondents mentioned structural barriers – state regulated PILOT or taxation amounts

When asked if there was anything they would have done differently on a canceled project, most answers indicated starting engagement earlier.

- Most common response is they would have started **community engagement** earlier
- But, other respondents noted this backfired – they wish they would have started community engagement later

"Would have approached more neighbors from the beginning to increase local participation in the project to give more people 'skin in the game'."

"Wait until site control was further along before starting community engagement… The long window of engagement (about 3 years before permit application) allowed opposition to form."