

## Applying SWOT-AHP Analysis to New Jersey Offshore Wind

Faith Monesteri, Dr. Meghann Smith

### INTRO

- Offshore wind is a crucial component of New Jersey's goals towards reaching 100% clean energy by 2050; however, opinions of offshore wind development across different stakeholder groups are often conflicting and remain underexplored. This research aims to address this by performing SWOT-AHP (strengths, weaknesses, opportunities, and threats; analytical hierarchy process) analysis to support informed decision making and strategic planning towards fostering community acceptance.

### METHODS

- Identification of Stakeholders:** Contact information was compiled for offshore wind stakeholder groups, including academic, industry, NGO, and local community members.
- Identification of SWOT Attributes:** Using research, ten strengths, weaknesses, opportunities and threats of offshore wind were identified.
- Expert Interviews:** Academic and Industry experts were interviewed to rank and prioritize SWOT factors most important for the conversation surrounding offshore wind.
- Survey development and distribution:** The remaining stakeholders were asked to evaluate each SWOT factor's relative importance under a pairwise comparison
- AHP analysis:** Stakeholders (n=13) responses were transcribed into the AHP Excel template for pairwise comparison, judgement consolidation, summary of results (Fig. 1), and eigenvalue analysis.

### RESULTS

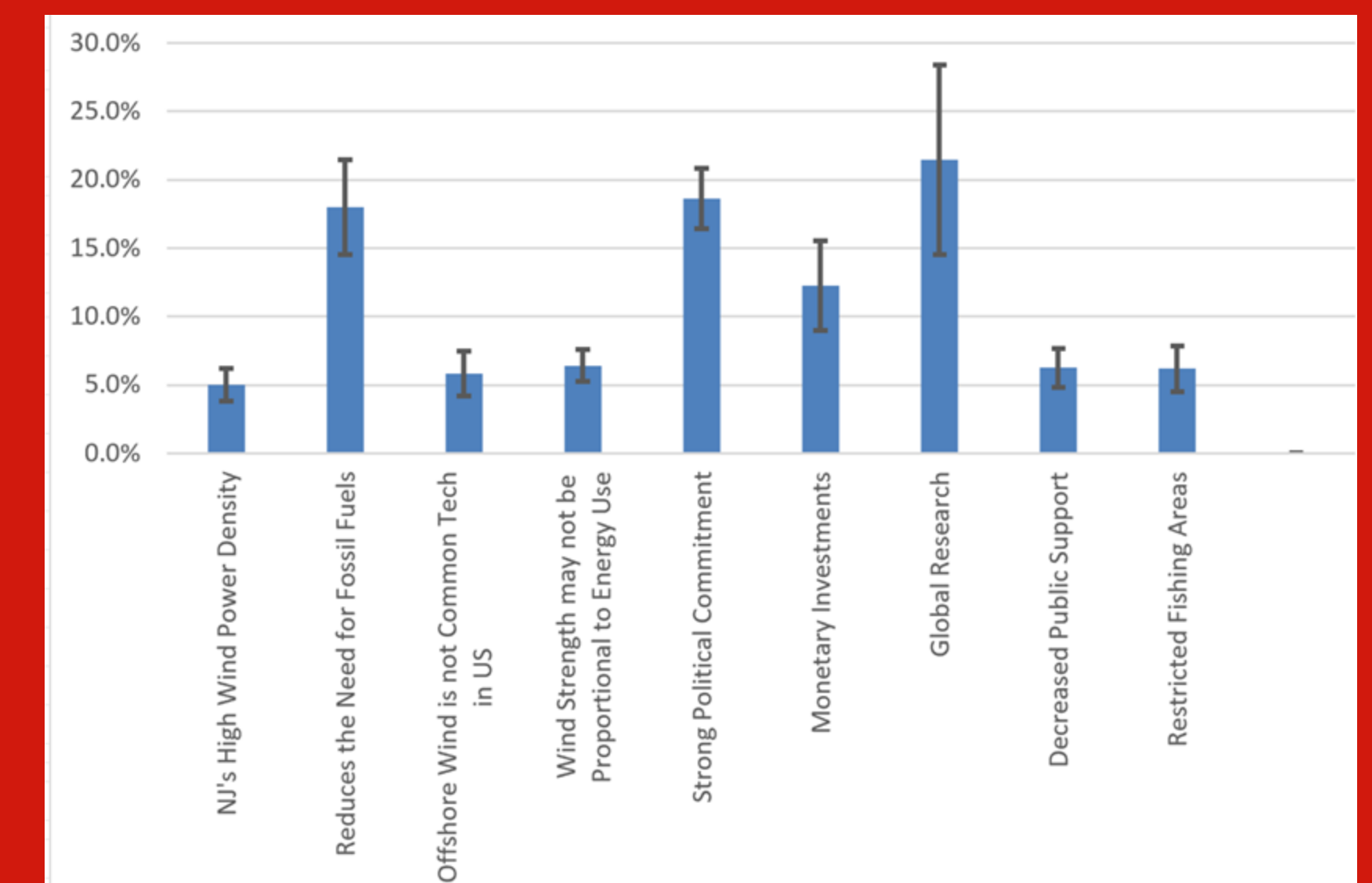
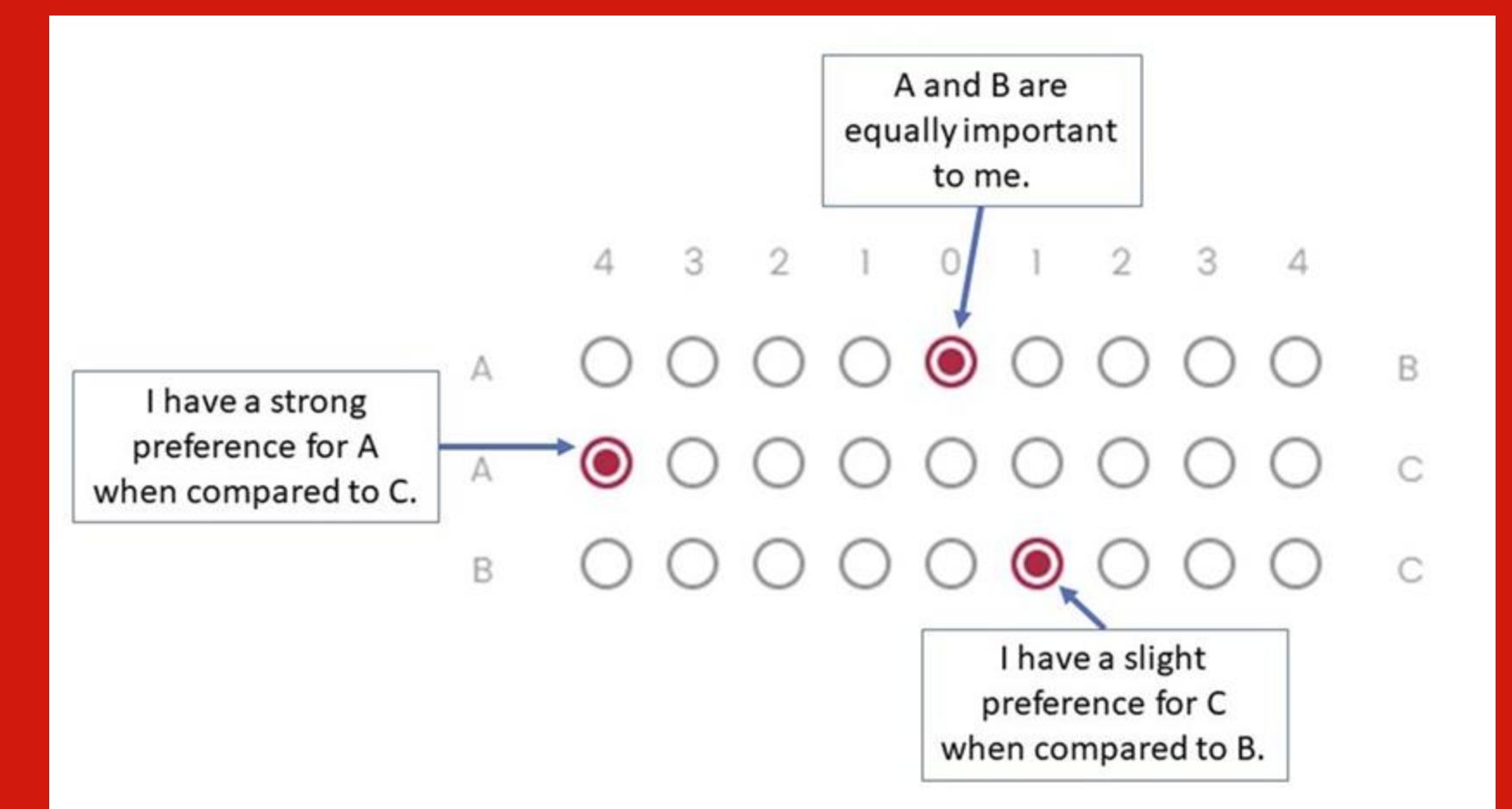
- Top Four Rated Values:
  - Strength: OSW reduces need for fossil fuels (21.4%)
  - Opportunities: Strong political commitment to OSW (19.2%), Monetary investments in OSW (14.8%), Global research (23.4%)
- Consistency ratio: 4.9%

### DISCUSSION

- Clear view of academic/industry perspectives
- Global innovation and research is highest priority
- Reduction of fossil fuels is logical end goal
- Political commitment: OSW is a highly politicized topic, policy can easily influence it
- More opinions needed, especially from an anti-OSW viewpoint
  - Highest weighted values were Opportunities and Strengths



Take the survey now!



monesterif1@montclair.edu [www.montclair.edu/cesac](http://www.montclair.edu/cesac)