# Wind of Change: Overcoming Misinformation in New Jersey's Clean Energy Transition

Gianna White[1], Heidi Yeh[2]
[1]Carnegie Mellon University, Engineering & Public Policy, Pittsburgh, PA, USA
[2]Pinelands Preservation Alliance, Southampton, NJ, USA
https://doi.org/10.38126/JSPG240117
Corresponding author: giannaw@andrew.cmu.edu
Keywords: renewable energy; offshore wind; science communication; misinformation; disinformation; climate education; New Jersey

**Executive Summary:** As the climate crisis advances, the need to transition from the fossil fuel economy to renewable sources of energy is becoming increasingly urgent. Thanks to climate leadership from the Murphy administration, New Jersey is poised to grow its renewable energy projects in an aggressive attempt to reach 100% clean energy by 2035. However, the state is currently facing pushback from local anti-offshore wind groups, such as Protect Our Coast, which actively disseminate false information about offshore wind (OSW) development and attempt to thwart NJ climate action. To address the growing threat of misinformation, New Jersey should build upon its existing climate education campaign and expand it to entire local communities. Allocating resources towards a dedicated public media campaign can effectively educate citizens and help dispel misinformation surrounding renewable energy initiatives, fostering greater support and understanding among New Jersey residents.

## I. Introduction

In 2020 the World Health Organization (WHO) declared an infodemic - an excess of information, especially incorrect and misleading information in the age of the internet and social media (Zarocostas, 2020). False narratives, inaccurate facts, and intentional misinformation campaigns can spread doubt and uncertainty among the public, resulting in lower support for critical policies and actions (Cook et al., 2018). Fossil fuel firms, global polluters, and their associates have spent millions of dollars to distribute inaccurate and misleading content. According to one study, 16 of the world's largest polluters were responsible for more than 1,700 of these disingenuous advertisements on Facebook in 2021. These ads received over 150 million impressions and earned the platform nearly $5 million (Turrentine, 2022).

As the climate crisis advances, the need to transition from the fossil fuel economy becomes increasingly evident. Discussions about climate protection now primarily focus on the necessity of decarbonizing the energy industry by incorporating renewable sources of energy (Krishnan et al., 2022). The US is falling behind China in wind energy generation (Figure 1) and falling far behind many other countries in overall renewable energy generation. New Jersey is set to ramp up its renewable energy projects in one of the nation's most aggressive attempts to reach 100% clean energy by 2035 (Governor Murphy's Office, 2023).

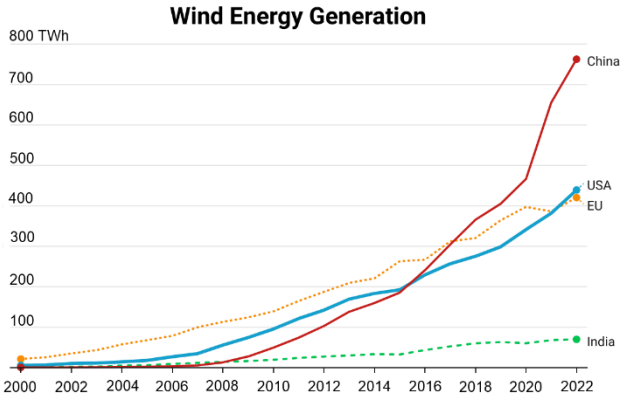


**Figure 1:** Global Wind Generation (Energy Institute, 2023).

However, the state is currently facing pushback from local anti-offshore wind groups. Protect Our Coast and similar groups engage in a practice called astroturfing: hiding their corporate or institutional sponsors to make their message and organization appear as a grassroots movement. Protect Our Coast receives funding from organizations like the Caesar Rodney Institute, a think tank connected to the fossil fuel industry (Selig, 2023). They actively disseminate false information and encourage residents with "energy privilege" to delay renewable energy projects in wealthier communities which leads to continued pollution in low-income communities and communities of color (Stokes et al., 2023).

## II. Findings

Anti-renewable groups purposefully disseminate false information concerning renewable energy and climate change. Their goal is to discourage local residents from supporting renewable energy projects. They are succeeding. A recent poll from the Monmouth University Polling Institute illustrates how support for wind energy has fallen by 30% in the last decade (Figure 2). A similar poll by Stockton University found similar results with 80% of adult New Jersey residents supporting offshore wind farms in 2019, followed by a drop to 50% in 2023. Opposition more than doubled over the same time period (*Wind Energy*, 2023). The findings of the Monmouth University poll highlight the need for a proactive approach from the state and wind industry in engaging with communities. Tony MacDonald, director of the Urban Coast Institute at Monmouth University, made one of the report's final recommendations, which read as follows: "Clearly the state and wind industry have to do a much better job in reaching out to communities to demonstrate the economic and environmental benefits of these projects, as well as to counter misinformation about threats to tourism and threats to whales" (2023).

One of the most common reasons residents cited for opposition to offshore wind stems from a common point of misinformation: the false belief that offshore wind turbines kill whales. The Monmouth University Poll shows 45% of residents believe turbines harm whales to some degree (2023). Despite there being no evidence to implicate wind turbines in whale deaths, it remains a popular talking point for anti-renewable energy groups (Selig, 2023). These groups fabricate numbers and sensationalize the threat to wildlife in an attempt to dissuade uninformed residents. This is particularly troubling as recent studies state believing in a particular conspiracy theory about the development of the wind farm increases resistance to voting in favor of a potential wind farm in their community (Winter, 2022).

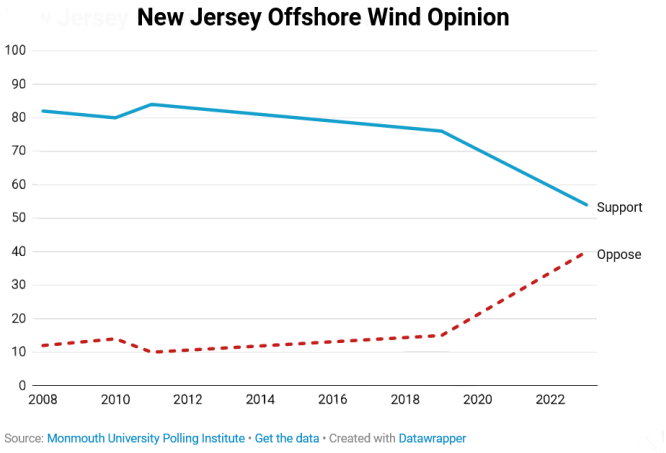


**Figure 2:** Support for Offshore Wind Energy (Monmouth University Polling Institute, 2023)

Misinformation does not merely result in misinformed citizens, it has far-reaching impacts that span beyond the locality of any single energy plant. In the US, wind energy opposition is concentrated in the Northeast. While the Northeast accounted for only 14% of all US wind projects between 2000-2016, it was home to 25% of those that faced opposition. Overall, 31% of projects in the northeastern United States faced opposition (Stokes et al., 2023). According to a recent Department of Energy report, setback regulations, which limit how close wind projects can be to buildings, are now the single most significant impediment to securing wind project sites in the United States (Lopez et al., 2021). Misinformation can create unnecessary setbacks and even outright bans on renewable energy. According to researchers, the purpose of misinformation in many anti-renewable groups is to raise doubts about renewable energy, thereby stalling or derailing initiatives (Simon, 2022). The impacts of misinformation are not limited to the locality of any given renewable energy project. Stokes et al's analysis of 1,184 wind energy projects in the US found that race and ethnicity appear to play an important influence in forecasting both the occurrence and degree of opposition. Wind projects in areas with a higher percentage of White people

and a lower percentage of Hispanic people were more likely to meet opposition, at more intense levels, and use a wider variety of opposition strategies. The study coined the term "energy privilege," which states that the delay and cancellation of renewable energy in wealthier, Whiter neighborhoods extends the lifespan of polluting Fossil fuel plants that are predominantly located in poorer communities and communities of color (Stokes et al., 2023).

The US is currently in the middle of an infodemic, and experts claim it is currently easier to find popular points of misinformation than it is to find evidence-based information (Zarocostas, 2020). This is due in part to the nature of research production and dissemination. In the US, academic institutions and prominent think tanks often place up-to-date evidence behind paywalls. Worse yet, these research findings are often written in unnecessarily enigmatic language that is difficult for the public to understand. The lack of open access to up-to-date scientific information and the growing struggle to adapt scientific communication for the digital world has left a gap in the information available to citizens. To fill this gap, the state should build upon its existing climate education campaign to directly address the growing threat of misinformation.

New Jersey has already shown its dedication to comprehensive climate education, as the first state in the nation to mandate climate education be added to the K-12 curriculum (Fasano, 2022). It is recommended that the state build off its existing climate education curriculum and expand to entire local communities, as opposed to just schools.

**III. Recommendation**

Allocating resources towards a dedicated public media campaign can effectively educate citizens and help dispel misinformation surrounding these initiatives, fostering greater support, and understanding among New Jersey residents. The goal is not to force residents to support renewables; the goal of this campaign is to fill a gap in public education, striking a balance between combating misinformation and protecting free speech.

New Jersey can learn from how other states have handled easing the public through the energy transition. The most notable example is Rhode Island; this state faced similar challenges from anti-offshore wind groups last year when an offshore wind project was announced. An in-depth review of these groups by Brown University's Climate Education Lab found that combating misinformation at a local level is now essential to the success of renewable energy (The Climate and Development Lab, 2023).

*i. Public Q&A sessions*

Public forums for professionals to address community problems and Q&A sessions on renewable energy initiatives can foster open dialogue, benefit residents, and address concerns and skepticism. Analyses of surveys, experiments, and interview data converge to illustrate that support for wind farms is strongly correlated to people's sense of equity, integrity-based trust, justice, and fairness (Winter, 2022). These sessions are necessary to ensure that residents feel a sense of procedural justice which has been linked to increased wind farm acceptance (Winter, 2022). These sessions could be modeled after the Bureau of Ocean Energy Management (BOEM) in-person open house meetings, promoting transparent and informative interactions with the community (What to Expect at the In-Person Open House Public Meetings, 2023).

*ii. Media collaborations*

Collaborate with local media for factual reporting and public engagement, promoting renewable energy initiatives, and debunking misconceptions through social media to foster informed discourse. This should include closer partnerships with environmental non-profits/coalitions such as the Wind Works Coalition (New Jersey Wind Works) whose member organizations are committed to disseminating evidence-based information. Their efforts to educate the public are hamstrung when they are kept at arms-length with limited access to the most up-to-date information. When misinformation about whale deaths was spreading rapidly in early 2023, the New York State Department of Environmental Conservation hosted a timely webinar called "Whale Tales & Whale Facts" to address the concerns that were not being assuaged by dismissive/suspicious statements that there was 'no evidence' of a connection (New York State Department of Environmental Conservation). The NJDEP could similarly be more transparent

about the science and logic that support its positions.

*iii. Credible experts and testimonials*

Include testimonials from residents and businesses who have benefited from renewable energy projects. Local authority's support for the wind project is listed as a highly influential factor in generating favorable views toward wind farms (Winter, 2022). The Offshore Wind Research & Monitoring Initiative (RMI) could be amended to require that all grant-funded projects include a public education component that goes beyond the K-12 and postsecondary age groups. There is a large opportunity gap between the public's desire to hear more from scientists, and scientist's willingness to engage in public discourse.

*iv. Improved messaging*

Going forward, messaging should emphasize the unique benefits of OSW, which has the shortest carbon payback period of any current renewable energy technology, is complementary to solar, and leverages NJ's geography (*Offshore Wind*). Although the state of NJ is a pioneer in the context of the US, it is important to show that the state is not unique in the global context. The technology is not new and has been used successfully for 30+ years. In fact, the US is far behind Europe and Asia in the scale and pace of its OSW development (National Academies of Sciences, Engineering, and Medicine, 2021).

Additionally, messages should be crafted with misinformation trends in mind. An awareness of the common ways that information is being misconstrued could help department representatives steer clear of embarrassing or inaccurate statements. This includes avoiding statements like 'we're building the plane while flying it' which implies a haphazardness to this undertaking. Offhand comments like this do a disservice to the depth of local expertise that is being tapped for research and the very long and thorough planning process that has been ongoing for decades.

Lastly, environmental justice should be kept at the forefront. Support for wind farms is primarily shaped by people's sense of equity, integrity-based trust, justice, and fairness (Winter, 2022). Highlight wind energy's role in addressing historical environmental injustices brought on by fossil fuel plants predominantly located in poorer communities and communities of color.

*v. Advantages*

Advantages of a public media campaign include authentic engagement and the development of relationships within the community. In the face of climate change it is essential that NJ cultivates a more informed electorate, better equipped to make informed decisions regarding climate mitigation and adaptation. Public education and communication campaigns serve as a form of pre-bunking and successfully lower people's susceptibility to false information and conspiracy theories.

*vi. Challenges*

Challenges include the time and financial resources required to support small-scale education efforts. Additionally, higher levels of transparency than typical infrastructure projects may be required, increasing the need for information sharing and public engagement. This is especially important as opposition groups seek to characterize conventional aspects of infrastructure development as being unique to the technologies they lack familiarity with.

*vii. No action alternative*

Without implementing a combination of the aforementioned recommendations, support for renewable energy initiatives is likely to continue to decline, while the opposition further fueled by the hyper-partisan nature of wind energy will continue to rise. This has and will continue to lead to disruptive activities such as lawsuits, slow-walking local permits, delayed project timelines, increased prices, and greater uncertainty in the renewable energy sector.

## IV. Conclusion

Most New Jersey residents care about climate action and want sustainable cities. An education campaign will go a long way in disrupting echo chambers and climate misinformation. Once misinformation is off the table, it may be easier for NJ residents to see the connection between rising sea levels and the need for renewable energy. This increased awareness can lead to more informed decisions and greater support for the state's ambitious clean energy goals, fostering a brighter, more sustainable future for all.

## References


Bureau of Ocean Energy Management. 2023. "What to Expect at the In-Person Open House Public Meetings." https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/41594_AtlanticShores_MeetingInfo_V02.pdf.

Cook, John, Peter Ellerton, and David Kinkead. 2018. "Deconstructing climate misinformation to identify reasoning errors". Environmental *Research Letters* 13:024018. https://doi.org/10.1088/1748-9326/aaa49f.

Dobson, Jim. 2019. "Shocking New Maps Show How Sea Level Rise Will Destroy Coastal Cities By 2050." Forbes. October 30, 2019 https://www.forbes.com/sites/jimdobson/2019/10/30/shocking-new-maps-show-how-sea-level-rise-will-destroy-coastal-cities-by-2050/.

Energy Institute. 2024. "Statistical Review of World Energy". https://www.energyinst.org/__data/assets/excel_doc/0007/1055545/EI-stats-review-all-data.xlsx.

Fasano, Olivia. 2022. "New Jersey first state to introduce climate change curriculum in schools". ABC News. September 23, 2022. https://abcnews.go.com/US/jersey-state-introduce-climate-change-curriculum-schools/story?id=90322277.

Harrington, Samantha. 2020. "How a New Jersey woman is fighting back against sea-level rise". Yale Climate Connections. March 9, 2020. http://yaleclimateconnections.org/2020/03/how-an-ocean-city-nj-woman-is-fighting-back-against-sea-level-rise/.

Lopez, Anthony, Trieu Mai, Eric Lantz, Dylan Harrison-Atlas, Travis Williams, and Galen Maclaurin. 2021. "Land Use and Turbine Technology Influences on Wind Potential in the United States." Energy 223 (May). https://doi.org/10.1016/j.energy.2021.2044.

Krishnan, Mekala, Hamid Samandari, Lola Woetzel, Sven Smit, Daniel Pacthod, Dickon Pinner, Tomas Nauclér, Humayun Tai, Annabel Farr, Weige Wu, and Danielle Imperato. (2022). "The net-zero challenge: Accelerating decarbonization worldwide." Mckinsey Global Institute. January 25, 2022. https://www.mckinsey.com/capabilities/sustainability/our-insights/the-net-zero-challenge-accelerating-decarbonization-worldwide.

Monmouth University Polling Institute. 2023. "New Jersey: Support for Wind Energy Plunges". Monmouth University Polling Institute. https://www.monmouth.edu/polling-institute/reports/monmouthpoll_nj_082923/.

National Academies of Sciences, Engineering, and Medicine. 2021. "Accelerating Decarbonization of the U.S. Energy System". National Academies Press. https://doi.org/10.17226/25932.

New Jersey Department of Environmental Protection. n.d. "Offshore Wind." https://dep.nj.gov/offshorewind/.

New York State Department of Environmental Conservation. (n.d.). https://www.dec.ny.gov/.

Office of the Governor. 2023. "Governor Murphy Announces Comprehensive Set of Initiatives to Combat Climate Change and Power the 'Next New Jersey'.". February 15, 2023. https://www.nj.gov/governor/news/news/562023/20230215b.shtml.

Selig, Kate. 2023. "The future of East Coast wind power could ride on this Jersey beach town." Washington Post. August 8, 2023. https://www.washingtonpost.com/climate-environment/2023/08/08/offshore-wind-energy-east-coast/.

Simon, Julia. 2022. "Misinformation is derailing renewable energy projects across the United States". *NPR*. March 28, 2022. https://www.npr.org/2022/03/28/1086790531/renewable-energy-projects-wind-energy-solar-energy-climate-change-misinformation.

Stokes, Leah C., Emma Franzblau, Jessica R. Lovering, and Chris Miljanich. 2023. "Prevalence and predictors of wind energy opposition in North America." *Proceedings of the National Academy of Sciences* 120: e2302313120. https://doi.org/10.1073/pnas.2302313120.

The Climate and Development Lab. 2023. "Discourses of Climate Delay in the Campaign Against Offshore Wind: A Case Study from Rhode Island." The Climate and Development Lab. December 12, 2023. https://www.climatedevlab.brown.edu/services-7.

Turrentine, Jeff. 2022. "Climate misinformation on social media is undermining climate action." NRDC. April 19, 2022. https://www.nrdc.org/stories/climate-misinformation-social-media-undermining-climate-action

Stockton University Polling Institute. 2023. "Wind Energy". .https://stockton.edu/hughes-center/polling/documents/2023-0928-wind-energy-full-poll-results.pdf.

Winter, Kevin, Matthew J. Hornsey, Lotte Pummerer, and Kai Sassenberg. 2022. "Anticipating and defusing the role of conspiracy beliefs in shaping opposition to wind farms." *Nature Energy* 7: 1200-1207. https://doi.org/10.1038/s41560-022-01164-w.

Zarocostas, John. 2020. "How to fight an infodemic." *The lancet* 395: 676. https://doi.org/10.1016/S0140-6736(20)30461-X.

**Gianna White** is a GEM Fellow at the National Renewable Energy Lab. She received her M.S in Engineering and Public Policy from Carnegie Mellon University and her B.S in Sustainable Urban Environments from New York University. Her research interests exist at the intersection of the psychology of sustainability, sustainable urban infrastructure, and equitable policy. Gianna's goal is to help build more sustainable cities and make sure no one is left behind in the process.

**Heidi Yeh** is the Policy Director of the Pinelands Preservation Alliance. Heidi holds a B.A. in Environmental Science from Barnard College of Columbia University, as well as an M.S. and Ph.D. in Oceanography from the University of Connecticut and Rutgers University, respectively. She seeks to use her career to bridge the divide between science and society to foster informed decisions at all levels of government.