

1-2019

Not Just Hot Air: How Rhetoric Changes Public Opinion on Windmills

Alena Smith

Follow this and additional works at: <https://scholarsarchive.byu.edu/sigma>

Part of the [International and Area Studies Commons](#), and the [Political Science Commons](#)

Recommended Citation

Smith, Alena (2019) "Not Just Hot Air: How Rhetoric Changes Public Opinion on Windmills," *Sigma: Journal of Political and International Studies*: Vol. 36 , Article 7.

Available at: <https://scholarsarchive.byu.edu/sigma/vol36/iss1/7>

This Article is brought to you for free and open access by the All Journals at BYU ScholarsArchive. It has been accepted for inclusion in Sigma: Journal of Political and International Studies by an authorized editor of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.

- Sigal, Janet, Louis Hsu, Stacey Foodim, and Jeffrey Betman. "Factors Affecting Perceptions of Political Candidates Accused of Sexual and Financial Misconduct." *Political Psychology* 9, no. 2 (1988): 273–80. DOI: 10.2307/3790956.
- Sigel, Roberta S. 1964. "Effect of Partisanship on the Perception of Political Candidates." *The Public Opinion Quarterly* 28, no. 3 (Autumn): 483–96.
- Stewart, Dennis D., Roger P. Rose, Felixia M. Rosales, Philip D. Rudney, Tasha A. Lehner, Gemma Miltich, Cassie Snyder, and Brianna Sadecki. "The Value of Outside Support for Male and Female Politicians Involved in a Political Sex Scandal." *The Journal of Social Psychology* 153, no. 3 (2013): 375–94.

Not Just Hot Air: How Rhetoric Changes Public Opinion on Windmills

Alena Smith

Introduction

Environmental concerns are nothing new in U.S. politics. More than half of U.S. citizens rank the environment as a top policy issue (Anderson 2017), and support for green energy has been on the rise (Kennedy 2017). One popular source of such energy comes from windmills. Despite the support for eco-friendly energy, windmills produce only 6.2 percent of the U.S.'s electricity today (Electricity Markets and Policy Group 2018). Many suggest that the disparity between green energy support and the low number of windmills in the U.S. is due to Not in My Backyard (NIMBY) opposition (Smith and Klick 2008). While individuals may tout the benefits of green energy, when faced with constructing an industrial-sized windmill within a few miles of their home they may rethink their position. Concerns including increased energy costs, decreased home values, constant noise, and landscape aesthetic, may dissuade individuals from supporting windmill construction in their city. In 2017, residents living in Lincoln County, South Dakota, successfully used these concerns to convince their legislators to block the creation of a proposed wind farm (McFetridge 2018). If a legislators' primary concern is reelection (Mayhew 1974) and legislators predict strong pushback from their constituents, they are unlikely to suggest or support the construction of local windmills.

While local government cannot be expected to change windmill designs to mitigate these concerns, they can emphasize windmill benefits. Using such framings, legislators can shape public opinion to increase community support for windmills. Argument framing has been widely studied and found to be effective, as individuals' perception of an issue can often have a greater impact than the issue itself (Cohen 1995). By studying which pro-windmill arguments are most effective, this study will help local

legislators and environmental activists know which arguments will generate most support for local windmills, which is likely applicable to many other sources of renewable energy.

In this study, participants in a vignette survey experiment were asked whether they would support an industrial-sized windmill being built near their home with one of four positive framings: environmental benefits, economic benefits, inclusion in the decision-making process, and social desirability of building windmills locally. The economic benefits treatment most increased support in all participants, regardless of political party. Democratic respondents also showed more support in the environmental benefits and social desirability conditions, while Republicans were not as impacted by these treatments.

This study demonstrates the value of issue framing, confirming that public opinion is malleable and can be changed by certain arguments. It also reveals that economic interests are a crosscutting issue for Republicans and Democrats, and arguments highlighting economic benefits can increase bipartisan support for environmental issues. Finally, this study suggests that those attempting to build public support for environmental measures, such as windmills, should focus on informing the public about their personal and community economic benefits.

Literature Review and Conceptual Framework

There are various theories behind the discrepancy between support for wind power and the local construction of windmills. As previously addressed, the NIMBY phenomenon is a frequently cited explanation for public opposition to local wind projects (Smith and Klick 2008). While people may support an idea in theory, they become more hesitant when asked to bear the required costs to implement that idea. For example, while people may support building low-income housing, few support such housing in their communities. Windmills carry various associated costs, including a possibility of increased energy bills, decreased home values, increased deaths of bats and birds, cleared vegetation to make room for the windmills, constant noise from the turbines, and disrupted scenic views (Union of Concerned Scientists 2013; Pasqualetti 2000). Several researchers have studied public perceptions of windmills in an attempt to isolate the impact of this phenomenon, some find that NIMBY does have an affect (van der Horst 2007), while others conclude that NIMBY does not adequately explain local opposition to windmills. Maarten Wolsink (2007, 1191), for instance, argued that attitudes toward wind power in general are positive, while attitudes toward wind farms are negative. In a study of Texans living near wind farms, Swofford and Slattery (2010) also concluded it was the negative attitudes toward wind farms, and not NIMBY, that were the primary reason communities opposed local windmills.

Others have hypothesized that exclusion from the decision-making process may be the primary cause of public opposition to local wind farms. Using examples in Europe, Wolsink (2007) hypothesized that public hostility to new windmills is often triggered by top-down, centralized processes of windmill planning. Such approaches meant voters

had little say in the process, and communities with these processes showed more opposition to the windmills built in their communities than those without such hierarchical approaches. In another study, interviews with a random selection of U.S. citizens who lived within five miles of a wind project indicated an overall positive attitude toward the local windmills. These attitudes highly correlated with several factors, including planning process perceptions (Electricity Markets and Policy Group 2018). When individuals felt more involved in the planning, location, and construction of local windmills, their perceptions of the windmills were more positive.

Like community perceptions of windmills, public opinion is also debated. Philip Converse (2006) held that the public does not have strong opinions about most political issues and, thus, lack coherent or consistent opinions. Public opinion on issues, he argued, was more random than structured and stable. William Riker (1996, 5) likewise contended that public opinion is not consistent but argued that such opinions were malleable by political elites. Achens and Bartel (2004), in their study of New Jersey in 1916, found that events seemingly outside of the government's control, such as shark attacks, could prove costly for legislators. This, they concluded, revealed that voters can act irrationally, punishing or rewarding legislators due to seemingly random events.

Other researchers take a more optimistic view of opinion formation, such as John Zaller (1992), who argued that people have systematic ways of forming and expressing opinions, as their expressed opinions averaged across salient considerations. Previously held opinions can then change when presented with a new argument, rather than changing at random. This theory is utilized when legislators use issue framing or attempts to showcase issues in a specific way by employing certain arguments, as this framing has been found to impact belief opinion and importance (Cohen 1995; Nelson and Oxley 1999; Slothuus and de Vreese 2009). The way issues are presented to individuals, particularly when these individuals do not hold strong opinions on these issues, can influence their opinions and increase or decrease support for the issue.

If community opposition to windmills is due to the personal costs that NIMBY seeks to protect people from, support for local windmills should increase when community members or survey participants are told of benefits they'll be able to experience for themselves. As these benefits would counteract the expected costs, the primary cause of opposition as theorized by the NIMBY phenomenon should hold less sway for the participants. If these positive arguments increase support for windmills, this suggests that public opinion is not completely random. It would suggest that individuals form opinions based on the available information and by salient considerations. An increase of support by both Republican and Democratic respondents would further show the effectiveness of issue framing and the malleability of public opinion, as the Republican Party tends to oppose increasing environmental protections and alternative energy sources. This would

illustrate that public opinion is not only based on partisan concerns and political divides; rather, certain framings can impact members of both parties and increase their support for certain public policies.

Experimental Design

I created a vignette survey to study the impact of different pro-windmill framings. Participants were randomly assigned to one of five groups and received different vignettes:

1. Control (no treatment)
2. Environmental Treatment
3. Economic Treatment
4. Open Process Treatment
5. Social Desirability Treatment

The control group was only told that their city council had recently announced the plan to build three industrial-sized windmills within five miles of the participant's home. Those in the environmental treatment were told that windmills protect the environment by decreasing their town's reliance of fossil fuels and reducing their carbon footprint, while those in the economic treatment group were told local windmills would decrease their monthly energy bill and bring jobs and economic growth to their town. Those in the open process treatment group differed from these concerns in that, instead of focusing on pro-windmill arguments, the treatment focused on the process of building local windmills. Participants were told that the city council wanted a fair and open process, with community input on details such as the windmills' location, measures taken to protect wildlife and the environment, and economic concerns. This draws from the conclusions of a qualitative study that found when community members were asked for their input on windmill construction, their approval for the windmills was markedly higher (Electricity Markets and Policy Group 2018). The social desirability treatment focused on the social desirability of supporting windmills. Participants in this group were told a poll conducted of their town found that 73 percent of the residents supported the windmills. Some studies have found that individuals make the largest and most lasting changes over environmental issues, such as energy usage, when influenced by peer pressure, as opposed to environmental and monetary messages (Schultz et al. 2007). Participants were then asked to rate their support of the proposed windmills on a five-scale opposition spectrum, which ranged from "Strongly Oppose" to "Strongly Support." The full vignettes are provided in the Appendix.

In these scenarios, windmills were specifically described as industrial-sized to reduce misunderstandings over which type of windmill would be built and participants were told they would be built within five miles of their home to address NIMBY concerns. For an elected official to have useful policy recommendations on windmills, they need to have data that accurately reflects the situations they will face.

Data

The data was collected via an Amazon Mechanical Turk (MTurk) survey. This site allows individuals from across the U.S. to take paid surveys online. As MTurk administers surveys in a randomized manner, it has been useful to universities and individuals conducting experiments. While MTurk respondents tend to be younger and more liberal than the general public, they also tend to be much more representative of the general public than convenience samples commonly used by other political science researchers, and their results overwhelmingly match those from ANES (Berinsky et al. 2012).

There were 1,007 MTurkers who filled out the survey on 23 March 2018. The sample overrepresented whites, Asians, and younger individuals while underrepresenting blacks and Hispanics. However, it was relatively close to the partisan makeup of the U.S.—37 percent of respondents were Democrats, compared to a national average of 33 percent; 40 percent were independents, compared to the nation's 37 percent; and 24 percent were Republicans, as opposed to a national average of 26 percent (Pew Research Center 2018A).

When tested for balance, no significant demographic differences were found between three treatment groups and the control group. The fourth treatment group, or Social Desirability group, was significantly more Democratic, liberal, and female. However, given the size of these groups (approximately 190 participants in each group) and the number of demographics tested (six), it is unsurprising that at least one demographic is significantly different. Moreover, as the findings will show, this treatment did not have the largest effect, despite Democrats and liberals being the most likely to support windmill construction, making such a difference relatively unimportant.

Results

Figure 1 shows the mean support of each group, with responses coded from 1 ("Strongly Oppose") to 5 ("Strongly Support"). While all treatments increased support for windmills, the economic treatment clearly had the greatest impact on the levels of support shown by participants. Compared to the control's average support of 3.77, the economic treatment had the largest mean at 4.27, which was significant at the 1 percent level. The second highest was the environment treatment, with a mean of 4.07 and also significant at the 1 percent level. The social desirability treatment was significant only at the 10 percent level, with a mean of 3.94. The open process treatment was not statistically significant, though its mean of 3.86 was slightly higher than the control's mean.

Figure 2 shows the aggregate responses for participants in the control compared to participants in each treatment. Nearly all treatments and the control had a pattern of increasing support but a drop at "Strongly Support." The economic treatment was the only treatment that resulted in a greater number of participants marking "Strongly Support" than any other response. Not only did the mean support for windmills increase the most for the economic treatment but participants' intensity of support increased.

To analyze the relationship between treatment groups and support for local windmills, I used a linear probability model. This model accounts for the different treatment groups while controlling for other important variables including party identification, age, and gender. The linear probability used was the following:

$$\text{Predicted Participant Support for Windmills} = \beta_0 + \beta_1 + \text{Treatment Effect} + \beta_2 \text{ Partisanship} + \beta_3 \text{ Ideology} + \beta_4 \text{ Sex} + \beta_5 \text{ Windmill in Town} + \beta_6 \text{ Age} + \beta_7 \text{ Education} + \beta_8 \text{ Income} + \beta_9 \text{ Geographic Density} + \delta$$

Figure 1. Mean Support for Windmills, by Treatment

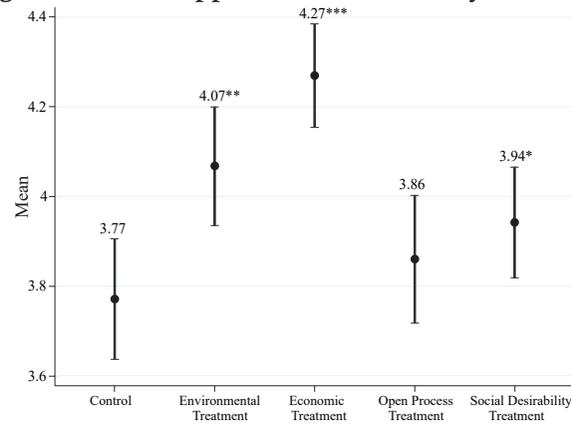


Figure 2. Proportion of Responses for Each Treatment

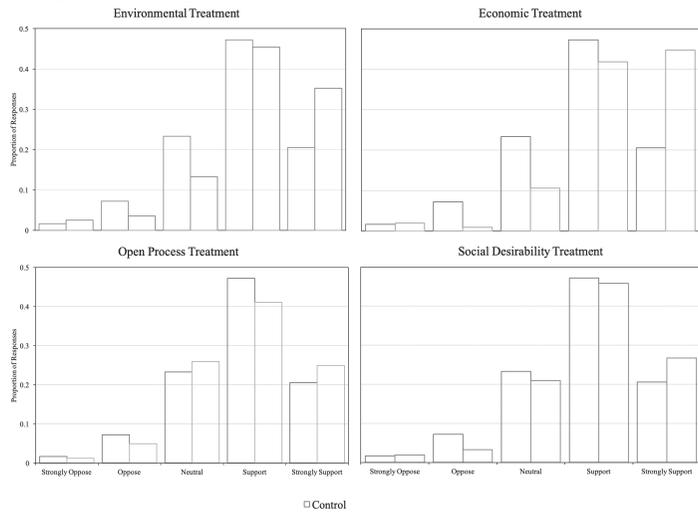


Table 1 gives the results of a linear probability model, showing the effect of each treatment on support with various demographic controls. Party identification and political ideology were measured on a binary scale as Republican or not Republican

and conservative or not conservative. “Male” and “Windmill in Town” were both respective binary variables controlling for gender and whether the participant had a windmill near their home. Education was coded on a five-point scale, age on a six-point scale (each age group included ten years), and income on an eight-point scale. Suburban was a binary variable describing participants’ geographic density.

Table 1. Effect of Treatments on Support for Windmills

Variable	Support
Environmental Treatment	0.323*** (0.089)
Economic Treatment	0.546*** (0.088)
Open Process Treatment	0.108 (0.094)
Social Desirability Treatment	0.232*** (0.088)
Republican	-0.180* (0.107)
Conservative	-0.289*** (0.106)
Male	-0.124** (0.057)
Windmill in Town	0.153* (0.082)
Age	-0.027 (0.022)
Education	-0.056* (0.034)
Income	0.007 (0.015)
Urban	-0.016 (0.056)
Constant	4.194*** (0.150)
Observations	950
R-squared	0.106

Coefficients reported from regression model, with robust standard errors in parentheses. Significance codes: *** p<0.01, ** p<0.05, * p<0.1.

Out of the treatment groups, the environmental, economic, and social desirability treatments were all statistically significant at the 1 percent level. As previous analysis revealed, the economic treatment predicted the greatest increase of support, followed by the environmental treatment. The open process treatment was not significant. Out

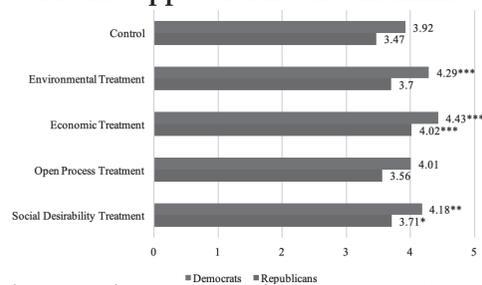
of the demographic controls, Republicans, conservatives, men, and educated individuals were more likely to oppose local windmill construction, while those who already had local windmills were more likely to support windmill construction.

In addition to analyzing which rhetoric was most effective in increasing public support for local windmills, political affiliations appear to effect the reception of these various messages. I divided participants by their partisanship, either Republican or Democrat, excluding individuals who marked themselves as “true independent,” “Other,” or “Don’t Know.” Those who marked themselves as “Strong,” “Not so Strong,” and “Independent Leaning Democrat” or “Independent Leaning Republican” were put into their respective groups. As independent leaners have been found to resemble weak partisans rather than true Independents (Keith et al. 1992), I included them in my analysis in their respective political parties. Table 2 shows the number of participants by treatment, separated by party identification, while Figure 3 shows the mean results for support of local windmills, separated by their political affiliation and treatment group.

Table 2. Number of Participants by Treatment

Treatment	Democrats	Republicans
Control	100	49
Environmental Treatment	102	57
Economic Treatment	109	64
Open Process Treatment	81	46
Social Desirability Treatment	92	82

Figure 3. Mean Support for Local Windmills by Party



Note: This figure shows the mean of the control and each treatment by participants’ party identification, whether Republican or Democrat. Significance was determined by a linear probability model as shown in Table 3. Significance codes: *** p<0.01, ** p<0.05, * p<0.1.

The effect of rhetoric changed when broken down by party. The economic treatment was still statistically significant for both Republicans and Democrats. Individuals in both parties best responded to arguments that would benefit their own wallet and their town’s well-being as included in the first treatment. The

environment was statistically significant at increasing Democrats’ public support for windmills but not for Republicans. This difference on the environmental argument was unsurprising. The Democratic Party is known for their beliefs in environmental protection, which may extend to reducing or eliminating fossil fuels. Consequently, it is unsurprising that their base responded to that argument more than Republicans, whose party has not made a similar environmentally friendly stance to their platform.

Table 3. Effect of Treatments on Support for Windmills, by Party

Variable	Support			
	Democrats	Republicans	Independents	All Respondents
Environmental Treatment	0.382*** (0.112)	0.306 (0.189)	0.270 (0.219)	0.323*** (0.089)
Economic Treatment	0.499*** (0.109)	0.591*** (0.184)	0.413* (0.227)	0.546*** (0.088)
Open Process Treatment	0.00 (0.118)	0.132 (0.199)	0.014 (0.222)	0.108 (0.094)
Social Desirability Treatment	0.254** (0.114)	0.300* (0.175)	0.007 (0.224)	0.232*** (0.088)
Republican				-0.180* (0.107)
Conservative	-0.170 (0.222)	-0.180 (0.091)	-0.401** (0.182)	-0.289*** (0.106)
Male	0.056 (0.074)	-0.181 (0.115)	-0.072 (0.146)	-0.124** (0.057)
Windmill in Town	0.132 (0.111)	0.092 (0.154)	0.349* (0.193)	0.153* (0.082)
Age	-0.006 (0.029)	-0.084* (0.045)	0.000 (0.054)	-0.027 (0.022)
Education	0.007 (0.044)	-0.224*** (0.074)	-0.060 (0.079)	-0.056* (0.034)
Income	-0.040** (0.018)	0.079*** (0.030)	0.027 (0.039)	0.007 (0.015)
Suburban	-0.035 (0.074)	0.122 (0.113)	-0.163 (0.141)	-0.016 (0.056)
Constant	4.080*** (0.188)	4.349*** (0.366)	4.123*** (0.361)	4.194*** (0.150)
Observations	484	298	155	950
R-squared	0.070	0.095	0.105	0.106

Coefficients reported from regression model, with robust standard errors in parentheses.

Significance codes: *** p<0.01, ** p<0.05, * p<0.1.

Table 3 shows the results of a linear probability model run separately on Democrats, Republicans, and independents, compared to results from all participants. The economic treatment had the greatest impact on members of all three groups and was significant at the 1 percent level for both major parties. Even when divided by party, economic arguments clearly increased support for all participants the most. The environment treatment (significant at the 1 percent level) was significant only for Democrats, while the social desirability treatment significantly increased support for participants from both major parties. While income was a statistically significant demographic for both parties, its coefficient reveals it isn't substantially significant. Being conservative was only significant for independents, decreasing their support for local windmills. Further lack of significance on part of independents may be due to low sample size, as each treatment group had approximately thirty-one independents. Finally, education was statistically significant at the 10 percent level for Republicans: More educated Republicans were predicted to have lower approval for windmills.

Discussion

When participants are given various pro-windmill arguments, economic arguments in favor of windmills raised support for local windmills for all participants the most, regardless of political party. These results are strikingly clear: Those who wish to increase public support for windmills should highlight the personal and community economic benefits that windmills bring. Such rhetoric should not be changed due to the city's demographics, as both Republicans and Democrats are most impacted by economic arguments. Windmill proponents should work to improve and highlight the economic benefits of windmills, as this will best increase their popularity and growth in the U.S.

Social desirability, while not as successful as economic arguments, also increased support for local windmills for members of both major parties. Simply telling individuals that a majority of people in their community support a certain policy can increase their own support, buttressing past studies which contended that social pressure could be a major influence in impacting individual decision (Schultz et al. 2007). It's especially noteworthy that participants knew the information in their vignette was incorrect, yet it still had a significant impact on their support levels. True data on participants' community's support of a local policy may increase participants' support even more than this study showed.

This study found further results that explore the impact of framing and the differences between Republicans and Democrats. As shown in Table 1, Republicans' support of local windmills is predicted to decrease as their education increases. This relationship may be due to confirmation bias, in which individuals interpret information to fit their already held beliefs to avoid cognitive dissonance or mental discomfort from holding two conflicting ideas. Zaller (1992) and Tetlock (2005) found that better-educated individuals were more likely to use previous knowledge to prevent contrary considerations from entering into their minds when considering

an issue. As Republicans are known for their opposition to alternative energy, especially at the cost of the economy, it stands to reason that educated Republicans, well aware of the debate surrounding renewable energy and windmills, will dismiss contrary ideas, including the economic benefit of windmills. It is reasonable to assume that well-educated Democrats would respond similarly to common Republican policies, even when middle ground is found. This reveals that even the use of middle ground may not overcome cognitive dissonance experienced by well-educated partisans.

Republicans' and Democrats' support for windmills under certain conditions reveals that support for environmentally friendly policies are not as sharply partisan as we once thought. Polling results indicate this is true—while Republicans and Democrats disagree over the extent to which the government should prioritize the environment, a majority of members of each party support increasing solar panel and wind turbine farms (Pew Research Center 2018B). The primary disagreement between Republicans and Democrats, it appears, is prioritizing the environment or the economy, and even then Democrats are much more likely to support environmental measures that help them economically. If environmental issues can be framed as helping both the environment and the economy, Republicans and Democrats could find themselves on the same side of the argument.

There are specific caveats to this study. While MTurk participants tend to be younger, it is older individuals who are more likely to participate in local politics. Thus, those who are overrepresented as voters in local government are underrepresented in this study. Another limitation is that those confronted with the construction of local windmills are unlikely to hear only positive arguments. Unfortunately, not all arguments could be addressed in this survey. In addition, confirmation bias may influence which arguments individuals hear and agree with, thus it would be difficult to model all the arguments constituents give weight to.

Future studies would do well to focus on an interaction between positive and negative arguments about windmills or similar topics to see how participants weigh these different framings. Such a study, particularly one focused on how partisan differences influence the weight participants give to these various arguments, would greatly contribute to our understanding of issue framing and partisan influence. This same design could also be applied to more polarized topics to see which framing most increases bipartisan support. Finally, future studies could explore the impact political sophistication has on political identity. For instance, analyzing whether greater environmental knowledge impacts partisans' support of certain environmental policies.

Despite its limitations, this project contributes to the current literature on public opinion and issue framing. The change in support variable on the treatment and partisanship shows that individual opinions can be changed, at least in the short term, on issues such as local windmills. The framings legislators and scholars use can impact community support and may be influential in enacting public policy. Finally, issues which may be seen as polarizing may be reconstructed to be viewed as crosscutting

issues, which can increase bipartisan support. Though some may argue that public opinion is inconsistent, this study shows that rhetoric to influence public opinion is much more than just hot air.

APPENDIX

Control	Your city council has recently announced their plan to build three industrial-sized windmills within five miles of your home.
Environmental Treatment	Your city council has recently announced their plan to build three industrial-sized windmills within five miles of your home. The city council and local newspaper have shared several high-quality peer-reviewed scientific studies in top journals which have recently found that windmills protect the environment by decreasing your town's reliance on fossil fuels and reducing your carbon footprint.
Economic Treatment	Your city council has recently announced their plan to build three industrial-sized windmills within five miles of your home. The city council and local newspaper have shared several high-quality peer-reviewed scientific studies in top journals which have recently found that windmills will decrease costs on your monthly energy bill and bring jobs and economic growth to your town.
Open Process Treatment	Your city council has recently announced their proposed plan to build three industrial-sized windmills within five miles of your home. The city council has clearly stated that they desire community input on specific details about the proposed plan, including the windmills' location, measures taken to protect wildlife and the environment, and economic concerns. Their goal is to make this as fair and open a process as possible to cater to the community's wishes.
Social Desirability Treatment	Your city council has recently announced their plan to build three industrial-sized windmills within five miles of your home. The city council has hired a professional survey firm to conduct a poll of the town's support for the plan. They found that 73 percent of the town's citizens supported building local windmills.

REFERENCES

- Achen, Christopher H. and Larry M. Bartels. 2004. "Blind Retrospection Electoral Responses to Drought, Flu, and Shark Attacks." *Center for the Study of Democratic Institutions*, working paper.
- Anderson, Monica. 2017. "For Earth Day, Here's How Americans View Environmental Issues." *Pew Research Center*, April 20. www.pewresearch.org/fact-tank/2017/04/20/for-earth-day-heres-how-americans-view-environmental-issues/.
- Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis* 20, no. 3, pp. 351–68. DOI:10.1093/pan/mpr057. Cambridge University Press.
- Cohen, Jeffrey E. 1995. "Presidential Rhetoric and the Public Agenda." *American Journal of Political Science* 39, no. 1 (February): 87–107.
- Converse, Philip E. 2006. "The Nature of Belief Systems in Mass Publics." *Critical Review* 18, pp. 1–74. DOI: 10.1080/08913810608443650.
- Electricity Markets and Policy Group. 2018. "National Survey of Attitudes of Wind Power Project Neighbors." *Berkeley Lab*. www.emp.lbl.gov/projects/wind-neighbor-survey?utm_source=Hoen-Wind+Acceptance+Survey+Webinar+reminder&utm_campaign=Hoen-Wind+Acceptance+Survey+webinar+reminder&utm_medium=email.
- Jackson, Natalie and Grace Sparks. 2017. "A Poll Finds Most Americans Don't Trust Public Opinion Polls." *Huffington Post*, March 31. www.huffingtonpost.com/entry/most-americans-dont-trust-public-opinion-polls_us_58de94ece4b0ba359594a708.

- Keith, Bruce E., David B. Magleby, Candice J. Nelson, Elizabeth Orr, Mark C. Westlye, and Raymond E. Wolfinger. 1992. *The Myth of the Independent Voter*. Berkeley, CA, the University of California Press.
- Kennedy, Brian. "Two-Thirds of Americans Give Priority to Developing Alternative Energy over Fossil Fuels." *Pew Research Center*, January 23, 2017. www.pewresearch.org/fact-tank/2017/01/23/two-thirds-of-americans-give-priority-to-developing-alternative-energy-over-fossil-fuels/.
- Mayhew, David. 1974. *Congress: The Electoral Connection*, New Haven: Yale University Press.
- McFetridge, Scott. 2018. "New Rebellions against Wind Energy Stalls or Stops Projects." *Seattle Times*, February 21. www.seattletimes.com/business/new-rebellion-against-wind-energy-stalls-or-stops-projects/.
- Nelson, Thomas E. and Zoe M. Oxley. 1999. "Issue Framing Effect on Belief Importance and Opinion." *The Journal of Politics* 61, no. 4 (November): 1040–67.
- Pasqualetti, Martin J. 2000. "Morality, Space, and the Power of Wind-Energy Landscapes." *Geographical Review* 90, no. 3, pp. 381–94. DOI: 10.2307/3250859.
- Pew Research Center. 2017. "Americans' Attitudes About the News Media Deeply Divided Along Partisan Lines." *Pew Research Center*, May 10. www.journalism.org/2017/05/10/americans-attitudes-about-the-news-media-deeply-divided-along-partisan-lines/.
- Pew Research Center. 2018A. "Party Identification Trends, 1992-2017." *Pew Research Center*, March 20. www.people-press.org/2018/03/20/party-identification-trends-1992-2017/.
- Pew Research Center. 2018B. "Majorities of Republicans and Democrats Support Increased Use of Solar, Wind Power." *Pew Research Center*, May 11. www.pewinternet.org/2018/05/14/majorities-see-government-efforts-to-protect-the-environment-as-insufficient/ps-05-10-18_report-01/.
- Pollak, Otto. 1943. "Conservatism in Later Maturity and Old Age." *American Sociological Review* 8, no. 2 (April): 175–79.
- Riker, William H. 1996. *The Strategy of Rhetoric: Campaigning for the American Constitution*. New Haven and London: Yale University Press.
- Schultz, P. Wesley et al., 2007. "The Constructive, Destructive, and Reconstructive Power of Social Norms." *Psychological Science* 18, no. 5 (May 1): 429–34.
- Slothuys, Rune and Claes H. de Vreese. 2009. "Political Parties, Motivated Reasoning, and Issue Framing Effects." *The Journal of Politics* 72, no. 3 (July): 630–45.
- Smith, Eric and Holly Klick. 2008. "Explaining NIMBY Opposition to Wind Power." Paper presented at the annual meeting of the APSA 2008 Annual Meeting, Hynes Convention Center, Boston, Massachusetts. August 28. www.polsi.ucsb.edu/faculty/smith/wind.pdf.
- Swofford, Jeffrey and Michael Slattery. 2010. "Public Attitudes of Wind Energy in Texas: Local Communities in Close Proximity to Wind Farms and Their Effect on Decision-Making." *Energy Policy* 38, no. 5 (May): 2508–19. www.sciencedirect.com/science/article/pii/S0301421509010027.
- Tetlock, Philip E. 2005. *Expert Political Judgment: How Good Is It? How Can We Know?* Princeton, NJ: Princeton University Press, pp. 125–28.
- Union of Concerned Scientists. 2013. "Environmental Impacts of Wind Power." March 5. www.ucsusa.org/clean-energy/renewable-energy/environmental-impacts-wind-power#.W_SObOhKhaQ.
- van der Horst, Dan. 2007. "NIMBY or Not? Exploring the Relevance of Location and the Politics of Voiced Opinions in Renewable Energy Siting Controversies." *Energy Policy* 35, no. 5 (May): 2705–14. www.sciencedirect.com/science/article/pii/S0301421506004848.
- Wolsink, Maarten. 2007. "Wind Power Implementation: The Nature of Public Attitudes: Equity and Fairness Instead of 'Backyard Motives.'" *Renewable and Sustainable Energy Reviews* 11, no. 6, pp. 1188–207. www.DOI.org/10.1016/j.rser.2005.10.005.
- Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. Cambridge: Cambridge University Press.