Article

Deals in the Heartland: Renewable Energy Projects, Local Resistance, and How Law Can Help

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"I'm not anti-wind. I'm anti-how-it-was-done-here."[1]

"Climate policy is being controlled by these small groups."[2]

"The low-hanging fruit is gone."[3]

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1. Interview 201 with Anti-Wind Organizer (June 11, 2021) (on file with authors). Interviews are anonymized according to Institutional Review Board guidelines on research involving human subjects. All interviews were conducted by and are on file with the author, Christiana Ochoa, at Indiana University Maurer School of Law, Bloomington, Indiana.

2. Interview 502 with Former Economic Development Director (June 25, 2021) (on file with authors).

3. Interview 701 with Company Representative (Aug. 27, 2021) (on file with authors).

INTRODUCTION

This Article details the findings from empirical research exploring how occupants of rural spaces have employed legal mechanisms to welcome—or, more often, reject—deals for wind farms in their home counties. The findings offer new insights into the urgent interplay of public and private law in the United States' transition to renewable energy. This Article will contribute to the literature on the legal, political, and social forces with which the transformation to a green economy will interact. In doing so, the focus is very local, because the construction of a renewable energy grid relies heavily on agreements and relationships with local communities and transactions with the owners of open land. It thus explores the articulation of law with the renewable energy revolution in rural spaces and within rural communities. Recognizing that millions of acres of open land are already foreclosed to renewable energy projects due to rapidly increasing

community-level opposition, this Article is most concerned with the most local of questions: What are the factors leading individual communities and landowners to welcome or reject wind projects from being established in their midst? And, importantly, what are the legal structures and financial incentives easing and impeding the necessary and massive expansion in national wind power capacity over the past decade and into the future?

In other words, this Article describes the policy landscape and public law infrastructure that has resulted in wind prospectors showing up on landowners' doorsteps and before county boards, looking to enter into contracts and community agreements for the purposes of constructing wind farms. It does so to provide a clear analysis of the wind prospectors' relations with landowners and communities, and the terms on which the transactions rely or die. Ultimately, this Article is about the deals, and failed deals, with communities at the heart of the transformation to renewable energy. These questions are of vital importance. A better understanding of what drives positive or negative dispositions to wind-developments on the ground will affect the political and economic efficiency and success of America's shift to renewable power generation. Beyond these practical concerns, important questions regarding the contributions law makes, and struggles to make, in the face of the wicked public problem of climate change,[4] are also at the heart of this work. The roles government can play and the importance of formality in facilitating the creation of sustainable relationships[5] between tight-knit communities and wind company outsiders is also a core concern of this Article.

4. The lineage of the "wicked problem" originates from the field of design and urban planning, and has been imported into the literature regarding complex public policy issues, including climate change. *See* Horst W. J. Rittel & Melvin M. Webber, *Dilemmas in a General Theory of Planning*, 4 POL'Y SCIS. 155, 160–67 (1973); Richard J. Lazarus, "*Super Wicked" Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153 (2009); FRANK P. INCROPERA, CLIMATE CHANGE: A WICKED PROBLEM (2016).

5. Part V, *infra,* briefly discusses the role of the state in facilitating contract formation with the end goal of furthering policy objectives. In doing so, it will draw on analogously relevant literatures, such as Robert E. Scott, *The Case for Formalism in Relational Contract*, 94 NW. U. L. REV. 847 (2000).

As a counterpoint to previous empirical scholarship on the presence and importance of informal arrangements,[6] this Article points to the centrality and vital importance of formal deals when new actors (wind prospectors) alight in tight-knit communities. The reasons for their importance, and the functions they serve, provide novel insights into the role of local agreements in facilitating public law's efforts to crack the wicked and urgent climate challenge. It thus highlights the importance of such deals in the facilitation of exigent public policy and law.

In the context of America's turn to renewable resources, rural communities and private landowners act as the ultimate gatekeepers to situating wind turbines in particular locations. These isolated decisions, when massed with the decisions of their counterparts in neighboring communities, determine the viability of wind power.[7] The relationships and deals between wind companies and local communities thus play crucial roles in addressing the complex, global public problem of achieving net-zero emissions by 2050. In other words, this Article addresses how these relationships and deals within tight-knit communities play a central role in realizing the public imperative of climate change mitigation.

Second, and flipping the script, this work also grapples with the effects of public law on decisions by communities to permit wind farms in their midst, or not. These decisions are situated within the context of a public imperative to transition to as much

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6. *See, e.g.*, Robert C. Ellickson, *Of Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County*, 38 STAN. L. REV. 623, 671–87 (1986) (discussing rural residents' non-legal means of resolving trespass disputes); Lisa Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEGAL STUD. 115, 115–17 (1992) (noting that the diamond industry created internal rules, institutions, and sanctions to deal with industry disputes); Eric A. Feldman, *The Tuna Court: Law and Norms in the World's Premier Fish Market*, 94 CALIF. L. REV. 313, 314 (2006) (noting that the government developed a specialized court, formal rules, and procedures to efficiently resolve disputes regarding goods auctioned at the Tsukiji fish market).

7. The authors recognize the similarity as well as the differences in the concerns of local communities regarding solar energy installations. *See* Jessica Crawford, Douglas Bessette & Sarah B. Mills, *Rallying the Anti-Crowd: Organized Opposition, Democratic Deficit, and a Potential Social Gap in Large-Scale Solar Energy*, 90 ENERGY RSCH. & SOC. SCI., Aug. 2022, at 1, https://doi.org/10.1016/j.erss.2022.102597. While wind farms are the focus of this Article, it may also provide valuable insights into the challenges facing large-scale solar energy projects.

renewable energy as possible as quickly as possible. The decisions can therefore benefit from public policy, law, and financial incentives designed to deliver the United States to its stated climate mitigation goals. This Article thus explores how public law, can be better marshaled to facilitate deals and stable relationships between communities and wind companies, partially by creating and passing along value that can make deals attractive where they might otherwise not have been.

Finally, this Article discusses the roles that social and economic considerations play in local decisions to deal with and form enduring relationships with wind farm operators, or not. A narrow rational actor model would predict that landowners and communities would decide whether to allow wind turbines to take hold in their communities, and on their property, if doing so ultimately would benefit them (i.e., if they received a net benefit such that, even taking into account the harms they will or might incur, they are made better-than-whole from the combined effect of the new wind turbines on their land value; the earnings potential from the combination of prior land uses and wind-related income; tax incentives; and the diluted effects of improvements in their community's schools, roads, public services, etc.). While these factors are important, our research shows that intangible factors, including social considerations and lifestyle attachments, play pivotal roles in these decisions, as counties, communities, and individual landowners struggle with the realities of a changing landscape and perceived changes to their rural and local identities. For tight-knit, traditional, rural communities, these non-monetizable considerations cannot be overstated or overlooked. Often, these factors lead communities to take stances with respect to wind farms—pro or anti—and these positions become embedded in the social fabric, easing or impeding deals between wind companies and rural communities.

Increasingly, the story of the creation of renewable energy infrastructure is riddled with conflict and resistance.[8] Indeed,

8. In the United States, resistance is mostly localized and non-violent. Still, the specter of increased tensions is never far. *See, e.g.*, Jake Thomas, *Solar Panels in Posey County Causing an Uproar*, 44 NEWS (Mar. 31, 2021), https://www.wevv.com/content/news/Solar-Panels-in-Posey-County-Causing-an-Uproar-?574111751.html [https://perma.cc/Q7KM-JLX3?type=image] (describing protests and a meeting requiring disruptive participants to be ushered out in Posey County due to the possible construction of a large-scale solar farm); *see also infra* note 15 (describing the violent protests surrounding wind farms outside of the United States).

innumerable wind farm proposals have withered in the face of local opposition.[9] Still, a wind-reliant energy program requires a decentralized, atomized approach to energy generation, which depends on the agreement of local communities to allow them in their locations. Centralized energy production plants (nuclear, coal, natural gas, hydroelectric dams) are giving way to collections of wind turbines, usually scattered over the land of many landowners in rural communities whose participation is essential to the construction of a wind farm.

Wind turbine technology is rapidly improving, making turbines both taller and more efficient, and thus more able to access steady, high-speed winds.[10] At the same time, the cost of manufacturing wind-energy infrastructure is falling. As a result, larger and larger areas of rural land (as well as off-shore coastal areas)[11] will predictably become geographically viable locations for commercial-scale wind farm installations.[12] Still, open space—usually farmland—is necessary for the massive wind turbines that have become a feature of ever-larger portions of

9. *See infra* Part III.A (discussing the Indiana county ordinances that have resulted in companies' decisions to stop pursuing wind farm projects within numerous counties in Indiana).

10. *See, e.g.*, Off. of Efficiency & Renewable Energy, *Next-Generation Wind Technology*, U.S. DEP'T OF ENERGY, https://www.energy.gov/eere/wind/next-generation-wind-technology [https://perma.cc/6NJU-4VNT].

11. *See* Coral Davenport & Lisa Friedman, *Biden Administration Approves Nation's First Major Offshore Wind Farm*, N.Y. TIMES (May 11, 2021), https://www.nytimes.com/2021/05/11/climate/climate-wind-farm.html [https://perma.cc/7TS8-MJRR] (describing the Vineyard Wind project, which will include up to eighty-four turbines located twelve nautical miles off the coast of Martha's Vineyard; construction was set to begin in the summer of 2021, and by the end of the decade, 2000 turbines could be built along the U.S. Atlantic Coast).

12. Yahoo! Finance, *GE Renewable Energy CEO on the Push to Wind Power: There Is a Lot of Land in the U.S. with Good Wind*, YOUTUBE (Apr. 20, 2021), https://youtu.be/DJe_gnLiWd8 (explaining the capacity for wind energy to continue expanding rapidly in the United States and stating that "there is still a large amount of land in the U.S. with pretty good wind."). Wind energy in the United States is projected to continue to grow rapidly over the coming decades. Today, thirty-six states produce approximately 113 gigawatts (GW) of electricity (nearly doubling the 2013 amounts). The U.S. Department of Energy estimates that, by 2050, forty-eight states will host wind farms, producing over 400 GWs. *Map: Projected Growth of the Wind Industry from Now Until 2050*, U.S. DEP'T OF ENERGY, https://www.energy.gov/maps/map-projected-growth-wind-industry-now-until-2050 [https://perma.cc/KV6B-Y5WV].

the country's rural landscapes,[13] including in much of the country's heartland.

If the land on which wind farms must be installed were true *terra nullius*,[14] negotiating wind farm deals would be relatively easy. But, of course, it is not. These rural spaces are inhabited by individuals, families, and communities that have been and will be affected, often negatively. The terms on which wind energy projects enter these often tight-knit communities will bear on the ability of wind farm operators to establish stable and enduring relationships and operations.[15] Still, the expansion of wind energy projects in the United States is urgent and growing quickly,[16] with very little public awareness, outside of rural spaces, of the existence or causes of widespread local resistance[17] and the roles law is playing in the local counties where wind companies propose projects.

This Article explores these phenomena. It is the result of research in rural Indiana—one of the states at the forefront of the transition to wind power.[18] The findings provide empirical insights into the legal and extralegal challenges at work nationally in the construction of a renewable energy grid.

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13. *See* Off. of Energy Efficiency & Renewable Energy, *History of U.S. Wind Energy*, U.S. DEP'T OF ENERGY, https://www.energy.gov/eere/wind/history-us-wind-energy [https://perma.cc/NM9K-V6FJ].

14. The term *terra nullius* was employed in the service of colonization. While the term was used to denote land that was ostensibly empty, or land that belonged to no one, it was often used to make invisible the native or aboriginal inhabitants of wide geographic areas. *See, e.g.*, Stuart Banner, *Why* Terra Nullius? *Anthropology and Property Law in Early Australia*, 23 LAW & HIST. REV. 95, 95 (2005).

15. Wind energy installations have been the subject of violent conflict. One well-known example is in Southern Mexico, where resistance to the construction of a commercial wind farm has resulted in state and private repression and violence. *See, e.g.*, Alexander Dunlap, *Counterinsurgency for Wind Energy: The Bíi Hioxo Wind Park in Juchitán, Mexico*, 45 J. PEASANT STUD. 630 (2018); *see also* Alexander Dunlap, *The "Solution" Is Now the "Problem": Wind Energy, Colonisation, and the "Genocide-Ecocide Nexus" in the Isthmus of Tehuantepec, Oaxaca*, 22 INT'L J. HUM. RTS. 550 (2018).

16. *See Wind Expected to Surpass Hydro as Largest Renewable Electricity Generation Source*, U.S. ENERGY INFO. ADMIN. (Jan. 24, 2018), https://www.eia.gov/todayinenergy/detail.php?id=34652 [https://perma.cc/DV59-3A7N].

17. *See, e.g.*, sources cited *supra* note 15.

18. Wind Energy Techs. Off., *U.S. Installed and Potential Wind Power Capacity and Generation*, U.S. DEP'T OF ENERGY, https://windexchange.energy.gov/maps-data/321 [https://perma.cc/A26K-M88A] (showing Indiana's high installed wind power capacity relative to other states). Indiana, together with much of the Midwest, is also among the states with the highest wind resources

Part I of this Article orients readers to a sample of the counties on which this research focuses. This part also describes our field research methods. Part II provides additional information on the rapid expansion of wind energy installations in the United States and Indiana and the climate mitigation policy, law, and financing incentivizing this expansion. Part III describes the legal battles surrounding wind energy projects in Indiana. Part IV is the most important part of this article. It describes the conflicts that have taken shape in Indiana counties in which wind farms have been proposed. It describes the process by which wind farm operators approach individuals and licensing boards, and how this has often resulted in distrust, conflict, and failure. Part V provides recommendations born from our findings. It offers a set of proposals for better engagements, relationships, and deals with local communities contemplating wind farms, and makes proposals that aim at more deliberate, transparent, and inclusive processes in approaching communities affected by projected renewable energy projects. This Part also recommends more generous compensation structures to communities receiving such projects. Part V is deeply informed by the literature on the role of the state in contracting, and scholarship regarding formality/informality and formal/informal institutions in tight-knit communities.

The Article concludes with a reminder that the rapid expansion of wind energy to date has exhausted the first-mover rural communities. The promise of wind energy depends on reluctant rural communities that may require the legal, relational, and policy innovations proposed herein if they are to grant their consent to future wind farms and participate in the renewable energy transformation.

I. WIND IN INDIANA'S RURAL COUNTIES

A. OVERVIEW

Indiana's first wind farm became operational in 2008 in Benton County.[19] To the outside observer, there were no notable

in the United States. *See* Wind Energy Techs. Off., *U.S. Average Annual Wind Speed at 80 Meters*, U.S. DEP'T OF ENERGY, https://windexchange.energy.gov/maps-data/319 [https://perma.cc/HXB5-6CWE].

19. *See* Z. Bednarikova, R. Hillberry, N. Nguyen, I. Kumar, T. Inani, M. Gordon & M. Wilcox, *An Examination of the Community Level Dynamics Related to the Introduction of Wind Energy in Indiana*, PURDUE UNIV. 13 (June

signs of resistance or conflict related to that project, or to the ensuing expansion of wind energy projects in Benton County and neighboring White County in the time since.[20] Compared to natural resource projects on which the authors have previously conducted research,[21] the transformation of this rural space from a predominantly agricultural landscape to an industrial-size power generation area occurred without protest, conflict, or violence.

The relative ease with which these wind farms were built, however, did not carry over to the whole of Indiana. Outside of Benton and White Counties, only four other Indiana Counties have permitted wind farms in their communities.[22] More importantly, in the time since 2008, no fewer than thirty Indiana counties have either placed outright moratoriums on wind farm construction or have passed land use ordinances placing restrictions on wind turbine placement, setbacks, noise levels, shadow casting, etc., that effectively prohibit wind farms within the counties' borders.[23] This represents a very large portion of Indiana's high-wind area.

Benton County continues to be the state's leader in wind energy, with nearly 1000 megawatts (MW) of nameplate wind energy capacity produced by 560 wind turbines.[24] The Fowler Ridge

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2020), https://cdext.purdue.edu/wp-content/uploads/2020/09/Wind-Energy_Final-report.pdf [https://perma.cc/NW3C-ZP6L].

20. For additional detail on Benton County's ability to minimize resistance to wind turbine installations, see Env'l Resilience Inst., *Benton County, Indiana, Successfully Sites Wind Energy, Protects Rural Roads from Damage*, IND. UNIV., https://eri.iu.edu/erit/case-studies/benton-county-indiana-successfully-sites-wind-energy-protects-rural-roads-from-damage.html [https://perma.cc/ZV2L-9XXP].

21. *See, e.g.*, Christiana Ochoa, *Contracts on the Seabed*, 46 YALE J. INT'L L. 103 (2021) [hereinafter *Contracts on the Seabed*] (analyzing the role that contracts play in creating frameworks for seabed mining); Christiana Ochoa, OTRA COSA NO HAY [THERE IS NOTHING ELSE] (Enlalucha Films 2014) [hereinafter OTRA COSA NO HAY], https://youtu.be/3SAym9Tduns (exploring the conflicts between local people, foreign companies, and environmentalists regarding the use of Columbia's natural resources); Christiana Ochoa, *Intransigence, Transition, Transformation: Natural Resources and Conflict Under Latin America's Modern Constitutions* (Ind. L. Stud. Rsch. Paper No. 468, 2021), http://dx.doi.org/10.2139/ssrn.3960339.

22. Bednarikova et al., *supra* note 19.

23. *See* Christiana Ochoa, Kacey Cook & Hanna Weil, Indiana County Data (unpublished compilation of Indiana county land-use ordinances and other relevant information on wind farm regulation) (on file with authors).

24. *See* Bednarikova et al., *supra* note 19.

Wind Farm is currently one of the twenty-five largest wind farms in the world.[25] Immediately abutting Benton County is the second largest wind producing county in the state, White County, which hosts the Meadow Lake Wind Farm, one of the ten largest in the world.[26] Together, these two counties have an installed wind energy capacity three times larger than the remainder of the entire state.[27] The region's geographic characteristics and high winds, combined with the counties' early openness to wind power, resulted in early installations.[28] Both counties remain open to large-scale commercial wind farm developments, and White County continued to add wind turbines through 2021.[29] Benton County is widely seen as a success story for wind energy installations in the state.[30]

Counties such as Henry and Tipton are important because of their mixed stances on wind power. Both counties have been targeted by wind developers as viable locations for commercial wind farms. Tipton County has a functioning wind farm within its borders.[31] At one point, both counties had developed zoning ordinances that were favorable to commercial wind projects.[32]

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25. *List of Onshore Wind Farms*, WIKIPEDIA, https://en.wikipedia.org/wiki/List_of_onshore_wind_farms [https://perma.cc/42LG-CDXQ] (discounting wind farms comprised of multiple farms).

26. *Id.* (discounting wind farms comprised of multiple farms).

27. *See* Bednarikova et al., *supra* note 19, at 42.

28. *See id.* at 8 ("[H]igher quality wind resources in Benton and White Counties are a crucial reason that the industry's earliest investments occurred there.").

29. *See* David Nderitu, Douglas Gotham, Liwei Lui, Darla Mize, Tim Phillips, Paul Preckel & Marco Velastegui, *2020 Indiana Renewable Energy Resources Study*, PURDUE UNIV. & STATE UTIL. FORECASTING GRP. 32 (Oct. 2020), https://www.purdue.edu/discoverypark/sufg/docs/publications/2020_RenewablesReport.pdf [https://perma.cc/4B4L-5PWS] (stating that the Indiana Crossroads Wind Farm, located in White County, had an in-service date of December 2021).

30. Interview 302 by Christiana Ochoa via Zoom (Sept. 21, 2021) (on file with authors); *see also* interview 701 with Company Representative, *supra* note 3; Envt'l Resilience Inst., *supra* note 20.

31. Nderitu et al., *supra* note 29.

32. *See* Carson Gerber, "*Windfall to Some, a Curse to Many": Tipton Wind Farm Pays Millions in Taxes, but Anti-Wind Sentiment Remains*, KOKOMO TRIB. (Sept. 14, 2020), https://www.kokomotribune.com/news/local_news/windfall-to-some-a-curse-to-many-tipton-wind-farm-pays-millions-in-taxes-but/article_3424f4c2-f45a-11ea-9623-03ed1d05dbea.html [https://perma.cc/84M4-3SQU]; Lauren Fitch, *Wind Developer Withdraws Plans to Build Prairie Breeze Wind Farm*, KOKOMO TRIB. (July 4, 2014), https://www.kokomotribune.com/news/local_news/wind-developer-withdraws-plans-to-build-prairie-breeze-wind

However, recently, both counties have changed course, adopting prohibitive ordinances or outright bans on large-scale wind turbines.[33] This change was brought on as a result of a notable backlash against the existing wind farms in the state.[34] The decisions to shut down wind development in these two counties and in many other Indiana counties have, in turn, caused political controversy and lawsuits.[35]

Three other types of counties were of interest to our team: (1) counties where wind farms were constructed despite significant community resistance, such as Warren County; (2) those where anti-wind farm sentiments ultimately repelled wind farms that were already well into the planning stages, such as Henry County; and (3) counties where new wind farms are currently being proposed, such as Vermillion County.

B. METHODS

To explore questions at the heart of this Article, we have identified a set of Indiana counties representing a variety of perspectives regarding the expansion of wind energy. To select appropriate counties, we conducted thorough research on the observable approach of every Indiana county to wind farms. For

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-farm/article_332f9108-be5f-5e3e-a520-0fc01e2f2916.html [https://perma.cc/R65L-FWTN].

33. *See* Travis Weik, *Public Hearings Dec. 10 on Renewable Energy Bans; Comments Will Be Accepted on Solar Moratorium, Wind Turbine Setbacks*, ENERGY CENT. (Dec. 3, 2020), https://energycentral.com/news/public-hearings-dec-10-renewable-energy-bans-comments-will-be-accepted-solar-moratorium-wind [https://perma.cc/FL6J-79TX] (noting that Henry County Commissioners voted to "effectively ban all commercial wind turbines"); HENRY COUNTY, IND., ZONING ORDINANCE § 9.7 (2020), http://henryco.net/attachments/L_Title_5_UTILITIES_WECS_Amended_12_16_20.pdf [https://perma.cc/NST9-RYRP] (imposing setback requirements that practically prohibit wind turbines without banning wind farms explicitly); *cf.* TIPTON CNTY., IND., ZONING ORDINANCE, art. 5, §§ 522.01–02 (2016), https://www.tiptongov.com/egov/documents/1448921738_08023.pdf [https://perma.cc/4WJG-GQXU] (providing for the development of wind farms, subject to the needs of local residents).

34. *See infra* Part III (discussing legal and political pushback to wind turbines in Indiana counties and local communities) and Part IV (highlighting findings from interviews with and qualitative research on residents' feelings about wind farms).

35. *See, e.g.*, Prairie Breeze Wind Farm, LLC v. Tipton Cty. Zoning Bd. of Appeals, No. 80C01-1309-PL-000308 (Tipton Cir. Ct. Jan. 16, 2014); Laura Arnold, *Wind Farm Suing Henry County Board of Zoning Appeals; Wants Judge to Review Official Decision*, IND. DG (Dec. 22, 2019), http://www.indianadg.net/big-blue-river-wind-farm-suing-henry-county-in-bza [https://perma.cc/K327-5J9F].

each county in Indiana, we cataloged (1) the presence and absence of wind farms, and their dates of construction, (2) the presence, absence, content, and dates of adoption of county ordinances designed to attract, prohibit, or place moratoria on wind farm construction within the county limits, and (3) all searchable court cases arising from controversies related to wind farms. We also collected information on court cases, statutes, and lobbying efforts at the state level connected to the expansion of wind energy in Indiana. In addition, we have searched databases and run general internet searches for local, state, and national news addressing wind energy development in Indiana. Having done this, we selected representative counties in which to focus our empirical research.

In order to obtain a robust set of interlocutors, we employed snowball fieldwork methodology[36] and talked with residents of counties where wind farms were proposed and stopped, as well as residents of counties where proposed wind farms were resisted and constructed, and residents of counties in which wind farms were constructed without substantial opposition. Some of these individuals reside in the counties in which we primarily focused, while others reside in other, similarly situated counties in Indiana. This was the result of the realities of finding individuals willing to talk with us about the process by which wind farms have been accepted or rejected in their communities. We also spoke with representatives of companies with an interest in constructing future wind farms in Indiana and companies focused on other parts of the country. In addition, we spoke with employees of think tanks and Non-Governmental Organizations (NGOs) working on expanding wind energy in the United States.

Our fieldwork spanned the months of June through September 2021, and included interviews with individuals in eleven Indiana counties. Over the course of nearly thirty hours of interviews, we spoke with anti-wind activists, company representatives, county officials, and county economic development corporation officers. We also spoke with employees at regional, state,

36. *See, e.g.*, Chaim Noy, *Sampling Knowledge: The Hermeneutics of Snowball Sampling in Qualitative Research*, 11 J. SOC. RSCH. METHODOLOGY 327, 330 (2008) ("[S]nowball sampling [is] when the researcher accesses informants through contact information that is provided by other informants. . . . Snowball sampling is arguably the most widely employed method of sampling in qualitative research . . . [and] is often employed as a particularly effective tool when trying to obtain information on and access to hidden populations.") (internal quotation marks and citations omitted).

and national governmental and non-governmental organizations focused on the expansion of wind energy and the conflicts it is creating in local communities.

II. THE WIND IMPERATIVE

From the perspective of people living in the wind-swept regions of Indiana, the pressure to consider wind farms is palpable. Global climate action, national commitments to reduce greenhouse gas emissions, and state and corporate commitments to achieve aggressive benchmarks for renewable energy output and use are combining to facilitate the expansion of wind energy projects.

Over the past twenty years, total energy capacity from installed wind farms in the United States has grown rapidly, from 2,472 MW in 1999 to 109,919 MW in 2020.[37] By the end of 2019, wind had become a larger source of U.S. renewable electricity generation (forty-two percent of total renewable electricity generation) than hydroelectricity (thirty-eight percent), and, at least at the moment, wind is far more prominent than solar energy (ten percent).[38] With wind now the least expensive source of energy, the sector is slated to continue growing rapidly.[39]

A. NATIONAL POLICY AND LAW

Beginning in January 2021, there has been a flurry of executive directives intended to outline a green energy policy for the Biden-Harris Administration. Several of these directives address financing for renewable energy development and may be indicative of a new trend towards financial incentives for wind energy development at the national level.

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37. Nderitu et al., *supra* note 29, at 24. For context, there are currently more than 70,800 wind turbines in the United States. *How Many Turbines Are Contained in the U.S. Wind Turbine Database?*, U.S. GEOLOGICAL SURV., https://www.usgs.gov/faqs/how-many-turbines-are-contained-us-wind-turbine-database [https://perma.cc/VTH9-EE8W]. The average wind turbine can currently generate enough electricity to power 940 U.S. homes. *How Many Homes Can an Average Wind Turbine Power?*, U.S. GEOLOGICAL SURV., https://www.usgs.gov/faqs/how-many-homes-can-average-wind-turbine-power [https://perma.cc/23J9-K7DW].

38. Nderitu et al., *supra* note 29, at 5.

39. *Id.* at 20–30.

1. Grants

In February of 2021, the Biden-Harris administration announced the formation of the Climate Innovation Working Group, jointly chaired by the White House Office of Domestic Climate Policy, Office of Science of Technology and Policy, and Office of Management and Budget.[40] At the same time, the U.S. Department of Energy (DOE) announced $100 million in funding for transformative clean energy research and development, of which advancements in wind energy technology are a key part.[41] The DOE is not the only federal agency providing grants for wind energy development. Importantly, through its Rural Energy for America Program (REAP), the U.S. Department of Agriculture provides farmers, ranchers, and small businesses in rural areas with grants and loan guarantees for renewable energy development assistance.[42]

2. Tax Incentives

In addition to grants, tax incentives also make up a significant portion of federal funding for renewable energy development. Production Tax Credits (PTC) were originally created through the Energy Policy Act of 1992 in order to "level the play-

40. *Biden-Harris Administration Launches American Innovation Effort to Create Jobs and Tackle the Climate Crisis*, THE WHITE HOUSE, https://www.whitehouse.gov/briefing-room/statements-releases/2021/02/11/biden-harris-administration-launches-american-innovation-effort-to-create-jobs-and-tackle-the-climate-crisis [https://perma.cc/S9PD-AAR6].

41. *DOE Announces $100 Million for Transformative Clean Energy Solutions*, U.S. DEP'T OF ENERGY (Feb. 11, 2021), https://www.energy.gov/articles/doe-announces-100-million-transformative-clean-energy-solutions [https://perma.cc/LB25-ZHZB]. The pathway for this funding is through the DOE's Advanced Research Projects Agency-Energy (ARPA-E), specifically the OPEN 2021 funding opportunity. Notably, ARPA-E is one of the U.S. Government's most significant financial contributions to climate research and technological development. Since its inception in 2009, ARPA-E has provided more than $3 billion in research and development funding and garnered another $10.3 billion in private-sector contributions to commercialize clean energy. ARPA-E, *Our Impact*, U.S. DEP'T OF ENERGY, https://arpa-e.energy.gov/about/our-impact [https://perma.cc/4LD6-BVB3].

42. Rural Development, *Rural Energy for America Program Renewal Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants*, U.S. DEP'T OF AGRIC., https://www.rd.usda.gov/programs-services/energy-programs/rural-energy-america-program-renewable-energy-systems-energy-efficiency-improvement-guaranteed-loans [https://perma.cc/W4J2-WUH8].

ing field" between renewables and other already-subsidized energy sources.[43] Functionally, the PTC "provides a tax credit of 1¢–2¢ per kilowatt-hour for the first 10 years of electricity generation for utility-scale wind."[44] In 2020, Congress extended the PTC program for only one year, beginning in December 2020,[45] and in August 2022, President Biden signed the Inflation Reduction Act, which extended the PTC to projects with construction beginning before 2024 and extends the PTC for at least ten years for any energy project with a zero or less greenhouse emissions rate.[46]

The Investment Tax Credit (ITC) operates in a similar fashion. ITC provides one-time credits of "12%–30% of investment costs at the start of the project"[47] and is designed to incentivize the proliferation of offshore wind farms.[48]

Congress also established a flat 30% ITC for any offshore wind project that begins construction by December 31, 2025, or had begun construction after January 1, 2017.[49] Recently, the PTC and ITC programs were bolstered by a proposal for a 10-year extension as part of the Biden infrastructure plan.[50]

Tax incentives for renewable energy development are also being implemented through broader tax restructuring plans. The Climate Innovation Working Group is focused on accelerating research and development investments as part of the wider

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43. Wind Energy Techs. Off., *Wind Energy Financial Incentives*, U.S. DEP'T OF ENERGY, https://windexchange.energy.gov/projects/incentives [https://perma.cc/X8LV-P79Y].

44. Wind Energy Techs. Off., *Production Tax Credit and Investment Tax Credit for Wind*, U.S. DEP'T OF ENERGY, https://windexchange.energy.gov/projects/tax-credits [https://perma.cc/YQ4U-78SN].

45. Consolidated Appropriations Act, 2021, Pub. L. No. 116-260, 134 Stat. 1182, 3052 (2020).

46. *See* Inflation Reduction Act of 2022, Pub. L. No. 117-169; *see also Inflation Reduction Act Extends and Modifies Tax Credits for Wind Projects*, MCGUIRE WOODS (Aug. 24, 2022), https://www.mcguirewoods.com/client-resources/Alerts/2022/8/inflation-reduction-act-tax-credits-for-wind-projects [https://perma.cc/G2RJ-D8M4].

47. Wind Energy Techs. Off., *supra* note 44.

48. LAURA B. COMAY, CORRIE E. CLARK & MOLLY F. SHERLOCK, CONG. RSCH. SERV., IN11980, OFFSHORE WIND PROVISIONS IN THE INFLATION REDUCTION ACT 2 (2022) (identifying the ITC as "[t]he primary federal tax provision supporting offshore wind").

49. Wind Energy Techs. Off., *supra* note 44.

50. *See* H. COMM. ON WAYS & MEANS, 117TH CONG., SECTION-BY-SECTION REP. ON BUILD BACK BETTER ACT, SUBTITLE F—INFRASTRUCTURE FINANCING AND COMMUNITY DEVELOPMENT §§ 136101–02.

National Climate Task Force.[51] This Task Force includes Cabinet-level leaders from twenty-one federal agencies, including the Department of Treasury.[52]

In March 2021, Secretary of the Treasury Janet Yellen announced that, as part of the "Made in America" tax plan, the Biden Administration would replace subsidies for fossil fuels with incentives for the production of clean energy as part of the Biden infrastructure package. The current federal approach to wind energy development is seemingly designed to court massive investments from the private sector and inject "tens of billions of dollars in private capital"[53] to jumpstart the transition away from fossil fuels.[54]

B. STATE POLICY AND LAW

Since federal tax credits and other financial incentives for renewable energy development are so broad, a number of state policies have filled in the gaps. Like the federal government, states offer tax incentives for both commercial and residential wind energy systems. Additionally, states also fund grant and bond programs. Understanding the different types of incentives offered by states in particular, often in furtherance of their clean energy portfolio standards (CPS),[55] is essential to understanding

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51. THE WHITE HOUSE, *supra* note 40.

52. *Readout of the First National Climate Task Force Meeting*, THE WHITE HOUSE (Feb. 11, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/02/11/readout-of-the-first-national-climate-task-force-meeting [https://perma.cc/F82H-768X].

53. *Keynote Remarks by Secretary of the Treasury Janet L. Yellen at COP26 in Glasgow, Scotland at the Finance Day Opening Event*, U.S. DEP'T OF THE TREASURY (Nov. 3, 2021), https://home.treasury.gov/news/press-releases/jy0457 [https://perma.cc/K4BJ-K8CD].

54. For a more complete array of national-level financial support programs for the wind industry, see generally Off. of Energy Efficiency & Renewable Energy, *Advancing the Growth of the U.S. Wind Industry: Federal Incentives, Funding, and Partnership Opportunities* U.S. DEP'T OF ENERGY (June 2021), https://www.energy.gov/sites/default/files/2021-07/us-wind-industry-federal-incentives-funding-partnership-opportunities-fact-sheet-v2.pdf [https://perma.cc/G8HL-RNB8] (explaining the financial support for industry growth).

55. For an overview of the importance and effectiveness of clean energy portfolio standards in states emphasizing wind energy, see Zachary Brecheisen, Comment, *Green Acres: How Bringing Pennsylvania Rural Electric Cooperatives Under the Full Provisions of the Alternative Energy Portfolio Standard Can Boost Renewable Energy Growth in Pennsylvania*, 19 PA. ST. ENV'T L. REV. 333, 351 (2011). For an examination of wind power and renewable portfolio standards (RPS) in Ohio, see Christopher E. Cotter, Comment, *Wind Power and the*

how communities engage with wind energy development and the ways in which money influences this engagement.

1. Tax Incentives

There is a large variety of financial incentives that states can use to bolster renewable energy development in local communities.[56] Given federal involvement in large tax incentives for corporations, state-level corporate tax incentives are relatively sparse. Six states offer corporate tax credits[57] for wind energy generation specifically, while two states, Massachusetts and Montana, offer corporate tax deductions.[58] State property tax incentives are more widely available, with the majority of states, including Indiana,[59] offering some type of property tax incentive for wind energy projects.[60]

Renewable Portfolio Standard: An Ohio Analysis, 32 U. DAYTON L. REV. 405, 438 (2007). *See also* David McRobert, Julian Tennent-Riddell & Chad Walker, *Ontario's Green Economy and Green Energy Act: Why a Well-Intentioned Law is Mired in Controversy and Opposed by Rural Communities*, 7 RENEWABLE ENERGY L. & POL'Y REV. 91, 92 (2016) (examining rural community resistance to wind in Ontario, Canada); K.K. DuVivier, *Rural Wind Windfalls*, 23 KAN. J.L. & PUB. POL'Y 401, 401, 413–19 (2014) (examining rural community benefits to wind development in Kansas and providing a general overview of platforms for opposition, e.g., wildlife disruption & conflicts with other types of energy development); Kelsey L. Hanson, *New York's Clean Energy Standard: Can Renewable Energy Development Revitalize Upstate New York's Economy*, 26 BUFF. ENV'T L.J. 55, 65 (2019) (examining whether New York's RPS can benefit rural communities). Indiana's Clean Energy Portfolio Standard was enacted in 2011 through S.B. 251 and is referred to as the Comprehensive Hoosier Option to Incentivize Cleaner Energy (CHOICE) program. *See Clean Energy Portfolio Standard, Program Overview*, DSIRE, https://programs.dsireusa.org/system/program/detail/4832 [https://perma.cc/4SZF-RLCM] (June 18, 2018).

56. According to the DSIRE database, there are nearly 2,000 state-based financial incentives falling into twenty-two categories across the United States. *See Summary Tables*, DSIRE, https://programs.dsireusa.org/system/program/tables [https://perma.cc/2R8Y-UR9W] (providing a geographical overview of financial incentives and regulatory policies that promote renewable energy in the United States).

57. *See Summary Maps*, DSIRE, https://programs.dsireusa.org/system/program/maps [https://perma.cc/6824-NB5G].

58. *See id.*

59. *See* Rev. Rul. 2009-06 ST, 20090624 Ind. Reg. 045090463NRA (June 10, 2009), http://iac.iga.in.gov/iac//20090624-IR-045090463NRA.xml.pdf [https://perma.cc/T4UR-MBZR] (ruling that tangible personal property that becomes part of a wind turbine are exempt from sale and use tax).

60. *See Summary Tables*, *supra* note 56. States can also offer personal tax incentives, most of which are tax credits. For example, Idaho allows taxpayers up to a forty percent deduction on the cost of wind and other energy systems for

2. Grant and Loan Programs

Among states, grant programs are a popular form of incentive for renewable energy development.[61] Eighteen states and Puerto Rico offer some type of grant program for renewable energy development generally, while eleven states offer grants for wind energy specifically. Each state's grant and loan programs differ.[62]

In contrast to Indiana, which no longer offers as part of its CPS any of the four grant programs previously available,[63] other states provide examples of aggressive use of grant programs.[64] In 2010, Pennsylvania offered six grant programs, enacted through a $650 million bill intended to aid renewable energy development.[65] Included in that bill was a $25 million grant and loan program for wind and geothermal energy, including wind energy production facilities and manufacturing facilities for wind turbines.[66] Within the same bill, further funding in the form of grants and loans for clean energy project development added $165 million to subsidized wind development in the state, jointly administered by the Pennsylvania Department of Community and Economic Development (DCED) and the Department of Environmental Protection (DEP).[67] Presumably, the coming years will see a renewed or increased reliance on these state-based grant and loan programs, further expanding wind energy production.[68]

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heating and cooling. *See Residential Alternative Energy Tax Deduction*, DSIRE (Dec. 18, 2015), https://programs.dsireusa.org/system/program/detail/137/residential-alternative-energy-tax-deduction [https://perma.cc/VQ9H-NEPP]. This deduction can be applied during the year the system is installed, and a twenty percent deduction is also applied for three years after installation. *Id.*

61. *See Programs*, DSIRE, https://programs.dsireusa.org/system/program?type=87& (click "apply filter," then "type," then "renewable energy" to see a list of renewable energy grant programs in various states) [https://perma.cc/38UX-VTLV].

62. *Id.*

63. *OED Grant Programs*, IND. OFF. OF ENERGY DEV., https://www.in.gov/oed/grants-and-funding-opportunities/oed-grant-programs [https://perma.cc/GA74-YRXZ].

64. *See Programs*, *supra* note 61.

65. *Pennsylvania's New $650 Million Clean Energy Fund*, NBC NY (Jan. 7, 2010), https://www.nbcnewyork.com/local/pennsylvania_s_new__650_million_clean_energy_fund_ny/1615334 [https://perma.cc/9K5X-RL26].

66. H.B. 1, 2008 Gen. Assemb., Spec. Sess., § 307(B) (Pa. 2008).

67. *See id.* at § 307(a)(1).

68. Off. of Energy Efficiency & Renewable Energy, *supra* note 54.

III. LEGAL CONFLICTS OVER WIND PROJECTS

While federal and state policies support the expansion of wind energy through tax, grant, and loan incentives, wind projects have experienced significant local resistance that is increasing over time. As states become more inviting to renewable energy projects, and potential wind farms in particular, the communities in the target locations have employed political organizing, activism, and courts in their efforts to resist wind turbines in their locations. This Part describes the legal conflicts arising from wind farm developments. It first details the vital role of county ordinances in permitting or blocking wind farms in individual counties. It then describes the litigation evidencing these conflicts.

A. COUNTY ORDINANCES

In most states, conflicts over wind farms are deeply local. This is mainly for two reasons, both rooted in land, attachments to land, and historical determinations about local rights to decide the uses to which land may be put. First, it is at the local level that residents are, or stand to be, most acutely affected by the construction of commercial wind energy projects.[69] In addition, the majority of states[70] have either constitutionally provided or legislatively delegated at least some powers to municipalities.[71] Indiana follows a "legislative home rule"[72] approach,

69. *See infra* Part IV.

70. Beginning in 1875, a number of states passed constitutional amendments expanding local powers by enabling localities to "exercise any function, so long as it is not prohibited by the state constitution or any state statute." *See* Jessie J. Richardson, Jr., Julie O. Farris, & Gerald A. Harrison, *The Law Behind Planning & Zoning in Indiana*, PURDUE UNIV. COOP. EXTENSION SERV. 2 (Feb. 2022), https://www.extension.purdue.edu/extmedia/id/id-268.pdf [https://perma.cc/7HJU-8DLU]. This configuration of local power is called the "home rule." *Id.* Grants of home rule are state-specific and tenuous. Still, at least forty-one states have some form of home rule, even if Dillon's rule (assuming that municipalities only have powers expressly granted to them, powers necessarily implied in those powers, and powers indispensable to the municipality's purpose) simultaneously continues in force in those states. *Id.*

71. Adam Coester, *Dillon's Rule or Not?*, 2 NAT'L ASS'N OF CNTYS 1, 3 (Jan. 2004), https://web.archive.org/web/20151010114031/http://celdf.org/downloads/Home%20Rule%20State%20or%20Dillons%20Rule%20State.pdf [https://perma.cc/LLT8-47ZR]; Richardson, Jr. et al., *supra* note 70.

72. For a discussion of the expansion and contraction of local versus state powers nationally, often phrased in terms of "home rule" versus "Dillon's Rule," see David Schleicher, *Constitutional Law for NIMBYs: A Review of "Principles of Home Rule for the 21st Century" by the National League of Cities*, 81 OHIO ST.

with the state retaining Dillon's Rule[73] powers, except where the state legislature extends powers to localities,[74] which it has done extensively.

Counties and municipalities (cities and towns) are granted significant ambit to act under Indiana's Home Rule statute,[75] while townships' powers are curtailed.[76] Among the legislative home rule powers delegated to counties and municipalities in Indiana are land use regulation, economic development, public safety, and property taxation.[77] Under Indiana's Home Rule statute, local units have "all the powers that they need for the effective operation of government as to local affairs."[78] These powers, delegated to Indiana counties, place approvals for wind energy projects in the hands of county councils, commissioners, and zoning boards.[79]

L.J. 883 (2020); *Principles of Home Rule for the 21st Century*, NAT'L LEAGUE OF CITIES (2020), https://www.nlc.org/wp-content/uploads/2020/02/Home-Rule-Principles-ReportWEB-2-1.pdf [https://perma.cc/HH7P-EUMN]. For an articulation of how this debate played out in Indiana leading up to its adoption of a Home Rule statute, see Leslie Bender, Note, *Home Rule, Revisited*, 10 J. LEGIS. 231 (1983).

73. In the United States, decisions regarding state versus local autonomy are usually structured with reference to "Dillon's Rule," a set of 1886 rulings by Iowa Judge John F. Dillon that limited county governmental powers in the face of local-level corruption, political machines, and criminal influence in municipal politics and elections. *See* Coester, *supra* note 71, at 1. The rule states:

> It is a general and undisputed proposition of law that a municipal corporation possesses and can exercise the following, powers and no others: first, those granted in express words; second, those necessarily or fairly implied in or incident to the powers expressly granted; third, those essential to the accomplishment of the declared objects and purposes of the corporation – not simply convenient, but indispensable. Any fair, reasonable, substantial doubt concerning the existence of power is resolved by the courts against the corporation, and the power is denied.

Id. See also Richardson, Jr. et al., *supra* note 70.

74. *See Home Rule in the Midwest*, IND. UNIV. PUB. POL'Y INST. 2 (July 2010) https://ppidb.iu.edu/Uploads/PublicationFiles/PC_HmRules_Web.pdf [https://perma.cc/ZK8Y-Q52R] (explaining home rule powers in Indiana).

75. *See* IND. CODE § 36-1-3-6 (2022).

76. *See* IND. CODE § 36-1-3-5 (2022); *see also* Bender, *supra* note 72, at 239.

77. *There When You Need It: County Government*, ASS'N OF IND. CNTYS 2 (May 2009), https://www.indianacounties.org/egov/documents/1251296396_485260.pdf [https://perma.cc/4A7R-JCVU].

78. IND. CODE § 36-1-3-2 (2022).

79. For a detailed description of the duties of county councils and County Commissioners, *see* ASS'N OF IND. COUNTIES, *supra* note 77, at 3 ("As a rule, the

The effect of land use regulation and zoning being situated at the county level has been that each Indiana county in which a wind energy project has been proposed (and some that have acted proactively) has individually considered whether commercial wind farms are desirable within the county's boundaries, often through determinations of what height and noise restrictions should be placed on wind turbines and the minimum buffers ("setbacks") between wind turbines and structures, property lines, roads, railroads, wildlife areas, residential districts, etc. These considerations are predominantly expressed in county zoning ordinances.

1. Benton County

Since the Benton County Wind Farms were first established in 2008, approximately thirty of Indiana's ninety-two counties have passed ordinances that would be seen as restrictive or prohibitive by wind farm operators.[80] This number betrays the prevalence of restrictive or prohibitive ordinances, as many counties, particularly in Southern Indiana, have not attracted wind farm prospectors due to their less-desirable wind profile,[81] and have not passed ordinances addressing commercial wind farms.

2. Henry County

One example of a restrictive/prohibitive ordinance arose in Henry County. As part of its efforts to thwart the Big Blue River Wind Farm and other interested wind companies, Henry County amended its wind ordinance to include a minimum setback of 3,300 feet for commercial wind turbines "from any property boundary line, dedicated roadway, railroad right-of-way, or overhead electrical transmission or distribution lines."[82]

The amendment to the wind ordinance has been characterized as a de facto moratorium on wind power projects.[83] When

council has jurisdiction over fiscal matters and the commissioners have jurisdiction over matters concerning either the exercise of regulatory or administrative powers.").

80. *See* Ochoa et al., *supra* note 23.

81. Off. of Energy Efficiency & Renewable Energy, *Indiana Land-Based Wind-Speed at 100 Meters*, U.S. DEP'T OF ENERGY, https://windexchange.energy.gov/maps-data/350 [https://perma.cc/53QN-8KCC].

82. HENRY COUNTY, IND., ZONING ORDINANCE § 9.7(A) (2020), http://henryco.net/attachments/L_Title_5_UTILITIES_WECS_Amended_12_16_20.pdf [https://perma.cc/NST9-RYRP].

83. Weik, *supra* note 33.

asked by a Henry County resident if the 3,300-foot setback would function as a ban on wind turbines, former Commissioner Ed Yanos responded "I'm sure it would. I can't really say that for certain . . . . It's highly unlikely there could be a project that would be able to center more than one or two wind turbines anywhere in the county, I would imagine."[84]

In December 2020, the Henry County Planning Commission voted to deny the proposed amendments, sending the proposed resolution back to the commissioners with an "unfavorable recommendation."[85] However, wind-favorable amendments are unlikely in the near future in Henry County: "The three Commissioners who approved a controversial wind turbine ordinance in 2018" are all no longer serving on the Commission and have been replaced by "anti-wind candidates."[86] The restrictive ordinances remain active in the County.[87]

3. Tipton and Wabash Counties

Tipton County, also discussed below with respect to litigation, acts as another example of county ordinance-based conflict. Tipton County's revised wind ordinance requires 1,500-foot setbacks from property lines and 2,640-foot setbacks from non-participating residences.[88] Soon after this ordinance was passed, juwi Wind withdrew the project it had proposed at the time and no new wind development opportunities have come to Tipton County.[89]

Wabash County's zoning ordinance provides another example, including setbacks from property lines of 3,690 feet from

84. Travis Weik, *Planners Reject Proposed Solar, Wind Bans; Moratorium, Setback Resolutions Head Back to Commissioners*, COURIER-TIMES (Dec. 12, 2020), https://www.thecouriertimes.com/news/planners-reject-proposed-solar-wind-bans-moratorium-setback-resolutions-head-back-to-commissioners/article_2a673090-b4d7-5449-bcee-1408c01c78bc.html [https://perma.cc/B5VD-4P9K].

85. *Id.*

86. Darrel Radford, *Commissioner Incumbent Falls in Middle District*, COURIER-TIMES (June 4, 2020), https://www.thecouriertimes.com/government/commissioner-incumbent-falls-in-middle-district/article_93ba7da5-c55b-513a-a61b-c1261364511c.html [https://perma.cc/GF8S-29WZ].

87. HENRY COUNTY, IND., ZONING ORDINANCE § 9.7(A) (2020), http://henryco.net/attachments/L_Title_5_UTILITIES_WECS_Amended_12_16_20.pdf [https://perma.cc/NST9-RYRP].

88. Bednarikova et al., *supra* note 19, at 28–29.

89. *See* Fitch, *supra* note 32.

non-participating structures, 1,980 feet from participant residential structure, and 1,000 feet from any non-participating property lines.[90] The maximum permissible noise is thirty-two decibels,[91] and no shadow flicker is allowed on non-participating structures.[92] Rush County enacted 2,300-foot setbacks in the face of a large-scale proposed project, prompting the wind energy company to unsuccessfully challenge the county Board of Zoning Appeals (BZA) in court.[93] These are just a few of the many examples of restrictive ordinances addressing wind energy projects in the state.[94]

In addition to ordinances that effectively prohibit constructing wind farms, nearly a dozen Indiana counties have passed outright moratoria on wind farms, making their establishment not just impractical, but impossible.[95] Together with restrictive/prohibitive ordinances, county-based moratoria have effectively locked out further wind projects in the majority of the state. Prior analysis concludes that only "nine Indiana counties [are] open to further investment in the sector, while twenty-nine counties had wind ordinances that substantially limit or effectively prohibit further investment in utility-scale wind energy capacity."[96]

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90. Wabash County, Ind., Ordinance 2017–85–9, § 6.24.R. (Dec. 18, 2017), http://gov.wabash.in.datapitstop.us/DATA/REPORTS/FLD00003/00007961.pdf [https://perma.cc/4QNN-ERWR].

91. *Id.* § 6.24.I.I.1. The Occupational Safety and Health Administration estimates that human whispers at five feet distance register at approximately forty decibels. *See* Bednarikova et al., *supra* note 19, at 29; *How Loud Is Too Loud?*, OCCUPATIONAL SAFETY & HEALTH ADMIN., https://www.osha.gov/noise#loud [https://perma.cc/C6GK-VA99].

92. Wabash County, Ind., Ordinance 2017–85–9 § 6.24.I.J (Dec. 18, 2017), http://gov.wabash.in.datapitstop.us/DATA/REPORTS/FLD00003/00007961.pdf [https://perma.cc/4QNN-ERWR].

93. *See* Flat Rock Wind, LLC v. Rush Cnty. Bd. of Zoning Appeals, 70 N.E.3d 848, 854–55 (Ind. Ct. App. 2017).

94. *See* Ochoa et al., *supra* note 23 (describing other examples of restrictive ordinances).

95. As of 2019, Allen, Boone, Clinton, Fulton, Grant, Jay, Marshall, Pulaski, Rush, Wayne, and Wells Counties all had imposed moratoria. *See* Bednarikova et al., *supra* note 19, at 29.

96. *Id.*

4. Thwarted State-Level Efforts to Intervene in Local Decisions

"This (bill) totally negates what we've fought for . . . ."[97]

In an effort to override this county-level resistance to future renewable energy projects, the Indiana State Legislature attempted in 2021 to curb the power of county ordinances to prohibit or restrict wind projects. House Bill 1381 (HB 1381), as originally proposed, would have limited home rule with respect to wind farm regulations by creating a state-wide set of industry-favorable standards for regulating wind farm construction, maintenance, and decommissioning.[98] Counties that had failed to pass wind power ordinances prior to July 1, 2021, and counties that had passed ordinances "that include[d] standards that are more restrictive, directly or indirectly, than the standards set forth in [HB 1381]" would be bound by the standards established by HB 1381.[99] The standards proposed in the draft bill facilitated wind farm construction, and counties would have been prohibited from imposing more restrictive requirements. For example, set back requirements from the center of a wind tower to the property lines of non-participating landowners were set at one and one-tenth the height of the wind power device's blade tip and two times the height to non-participating dwellings. HB 1381 also provided that such setbacks could be waived by affected parties;[100] shadow flicker (the constant flicker caused by the shadow of rotating turbine blades) could hit non-participating dwellings up to 30 hours a year;[101] and "sound attributable to the wind power device [would not] exceed an hourly average sound level of fifty (50) A-weighted decibels, as modeled at the outer wall of an affected dwelling."[102] After the House voted 58–38 in favor of the bill,[103] HB 1381 moved to the Senate for consideration.

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97. Jenny McNeece, A *"Complete Overreach"*, VINCENNES SUN-COM. (Feb. 17, 2021), https://www.suncommercial.com/news/article_56d7007d-7a24-588d-ab9c-14f9d8188735.html [https://perma.cc/8F7D-G7RQ] (quoting Trent Hinkle, Knox County Commission President).

98. H.B. 1381, 122d Gen. Assemb., 1st Reg. Sess. (Ind. 2021).

99. *Id.* at Sec. 1., Ch. 41., Sec. 1(a)(1)(B).

100. *Id.* at Sec. 1, Ch. 41., Sec. 13.

101. *Id.* at Sec. 1, Ch. 41., Sec. 14.

102. *Id.* at Sec. 1, Ch. 41., Sec. 16.

103. *See Actions for House Bill 1381*, IND. GEN. ASSEMBLY, https://iga.in.gov/legislative/2021/bills/house/1381 [https://perma.cc/4V5W-7BFC].

Popular reaction to HB 1381 was swift and overwhelmingly negative. Soon after the bill was introduced in mid-January 2021, state-wide calls went out on blogs,[104] and were re-broadcast by national[105] and state-specific[106] web-based communities opposed to wind farms. Local newspapers soon began reporting on the intention of HB 1381 to impose permissive standards for wind power that were either novel or were inconsistent with the standards explicitly established, often at great cost, by the counties.[107]

Soon, the Association of Indiana Counties[108] and numerous individual counties[109] and civil society organizations were expressing their opposition to the bill. Among the sentiments

104. *See, e.g.*, *What Does HB 1381 Do*?, DEFEAT IND. HOUSE BILL 1381 !!, https://defeathb1381.blogspot.com/2021/01/what-does-hb-1381-do_33.html [https://perma.cc/W4TA-DLZW].

105. *See* Indiana Wind Watch, *Defeat Indiana House Bill 1381*, NAT'L WIND WATCH (Jan. 27, 2021), https://www.wind-watch.org/news/2021/01/27/defeat-indiana-house-bill-1381 [https://perma.cc/R8GE-H5UR].

106. *See Defeat Indiana House Bill 1381!*, IND. WIND WATCH, https://web.archive.org/web/20210202140612/http://www.indianawindwatch.org [https://perma.cc/2SMQ-QT5K].

107. *See, e.g.*, McNeece, *supra* note 97; Tyler Juranovich, *County Officials Fear Loss of Local Control Over Wind, Solar Projects*, KOKOMO TRIB. (Mar. 12, 2021), https://www.kokomotribune.com/news/local_news/county-officials-fear-loss-of-local-control-over-wind-solar-projects/article_52b43160-8374-11eb-b0f9-3763fc4997e5.html [https://perma.cc/T85J-H5PY]; Samantha Thieke, *Tippecanoe Co. Commissioners Send Letter to Lawmakers Arguing Against Solar and Wind Farm Bill*, WLFI (Mar. 23, 2021), https://www.wlfi.com/content/news/Tippecanoe-Co-Commissioners-send-letter-to-lawmakers-arguing-against-solar-and-farm-bill-574050821.html [https://perma.cc/CQZ3-BJV5].

108. *Association of Indiana Counties (AIC)*, FACEBOOK (Feb. 18, 2021), https://www.facebook.com/IndianaCounties/photos/a.10150095451944929/10158898413784929 [https://perma.cc/7ZCM-PL28] ("AIC is not opposed to renewable energy. . . . However, HB 1381 removes a county's ability to develop long term, compatible land uses crafted through local public meetings. . . . Wind and solar companies will be able to randomly install projects that meet state standards but may conflict with future economic development projects, planned residential development or even road expansions.").

109. *See, e.g.*, Mike Emery, *Wayne County Commissioners Oppose State Wind Turbine, Solar Park Bill*, RICHMOND PALLADIUM-ITEM (Feb. 19, 2021), https://www.pal-item.com/story/news/local/2021/02/19/solar-panels-wayne-county-indiana-commissioners-wind-turbine/4512024001 [https://perma.cc/UBW4-6A8K]; David Stone, *Commissioners Approve Resolution Opposing HB 1381*, TIMES UNION ONLINE (Feb. 19, 2021), https://timesuniononline.com/Content/Local-News/Local-News/Article/Commissioners-Approve-Resolution-Opposing-HB-1381/2/453/131792 [https://perma.cc/2ZUZ-AAPC]; Jennifer Miller, Opinion, *30-Plus Counties Hit the Brakes on Wind Farms. Indiana May*

shared were that "decisions regarding wind and solar development are best made by the citizens living in the community, rather than by the wind and solar industry or state officials who live outside the community . . . ."[110] For example, one county commissioner stated: "This (bill) totally negates what we've fought for and what we were proactive on in creating our own ordinance . . . . This sets a horrible precedent to take away the rights counties have had for decades, which is to dictate their own zoning laws."[111]

In an effort to resuscitate the viability of the legislation and, with it, the possibility that wind power projects could get a toehold in counties that have passed restrictive/prohibitive ordinances, the bill was amended such that it would apply only to counties that had not adopted a wind power regulation or "ha[d] in effect on July 1, 2021, a wind power regulation that includes standards that are more restrictive, directly or indirectly, than the standards set forth in this chapter; *and* . . . allows the establishment of a renewable energy district within the unit in connection with the project."[112] In effect, the bill's industry-friendly standards would now apply only to counties that elected not to pass a wind power ordinance ahead of July 2021. Counties that had a restrictive wind ordinance could stay the course. Or, alternatively, they could identify Renewable Energy Districts (REDs) in which wind and solar farms could be developed using the standards set out in HB 1381.[113] The bill included handsome financial incentives for these counties to develop such REDs.[114]

One senator who voted in favor of the amended bill remarked that the redrafting was "about as big of a 180 as I've seen

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Soon Blow That Up., INDYSTAR (Mar. 10, 2021), https://www.indystar.com/story/opinion/2021/03/10/op-ed-indiana-may-overrule-local-governments-wind-and-solar/6814301002 [https://perma.cc/DUS7-RPLM]; Thieke, *supra* note 107.

110. Stone, *supra* note 109.

111. McNeece, *supra* note 97.

112. H.B. 1381, 122d Gen. Assemb., 1st Reg. Sess. (Ind. 2021) (as engrossed by Senate Apr. 12, 2021) (emphasis added).

113. *Id.*

114. Counties establishing REDs could "impose a one-time construction fee for each wind power device included in a project application . . . payable by the project owner" of up to "$3,000 per megawatt of installed capacity." *Id.* A RED is defined in HB 1381 as a district established after June 30, 2021 in connection with a renewable energy project and in which commercial solar or wind power devices would be located. *Id.*

on a bill . . . ."[115] HB 1381 successfully left the Senate Committees on Utilities[116] and on Tax & Fiscal Policy[117] and proceeded to the Senate floor.

The bill, however, was already heavily tainted by state-wide resistance. By the time the Senate was considering the bill, nearly sixty counties had expressed their opposition to HB 1381.[118] The map in Fig. 1 below depicts all counties which either opposed HB 1381 or submitted statements in favor of local control. Only those without shading did not indicate resistance. As a general matter, counties opposed HB 1381 because it removes a county's ability to negotiate on behalf of the community. "Citizens who live and work in these communities are the best ones to make the decision and will have their county's best interest in mind. House Bill 1381 negates the ability to develop long term, compatible land uses crafted through local public meetings."[119]

115. Kayla Sullivan, *Indiana Senate Passes Major Renewable Energy Bill Amendment*, FOX59 (Apr. 1, 2021), https://fox59.com/news/politics/indiana-senate-passes-major-renewable-energy-bill-amendment [https://perma.cc/Q7CU-R4C4].

116. IND. S. COMM. ON UTILS., COMMERCIAL WIND AND SOLAR STANDARDS AND SITING: VOTE ON H.B. 1381, 122d Gen. Assemb., 1st Reg. Sess. (2021) (passing 9-2).

117. IND. S. COMM. ON TAX & FISCAL POL'Y, COMMERCIAL WIND AND SOLAR STANDARDS AND SITING: VOTE ON H.B. 1381, 122d Gen. Assemb., 1st Reg. Sess. (2021) (passing 10-3).

118. Ass'n of Ind. Cntys. and Ind. Ass'n of Cnty. Comm'rs, *HB 1381 Map*, ASS'N OF IND. CNTYS (Mar. 16, 2021), https://www.indianacounties.org/egov/apps/document/center.egov?view=detail&id=2531 [https://perma.cc/47LY-WANA]. Fig. 1, *infra*, depicts all the counties which either opposed HB 1381 or submitted statements in favor of local control.

119. Ass'n of Ind. Cntys. And Ind. Ass'n of Cnty. Comm'rs, *Nearly 60 Indiana Counties Pass Resolutions to Oppose HB 1381*, ASS'N OF IND. CNTYS. (Mar. 9, 2021), https://www.indianacounties.org/egov/documents/1615934512_73643.pdf [https://perma.cc/YB9M-9NHY].

Fig. 1.

Ultimately, HB 1381 died on the Indiana Senate Floor, with no action taken by the full chamber.[120] According to the bill's chief Senate sponsor (Sen. Mark Messmer (R)), the amendments to the bill were not enough to overcome county concerns over local control.[121] Rep. Ed Soliday (R), the chief author of the bill, continued to pursue means to transition the state toward renewable energy during the 2022 legislative session.[122]

120. *See IN HB1381, 2021, Regular Session*, LEGISCAN (Apr. 15, 2021), https://legiscan.com/IN/bill/HB1381/2021 [https://perma.cc/Y3S7-4B6G] (demonstrating that the last vote on HB 1381 was an affirmative Committee Vote); *see also How a Bill Becomes Law*, IND. STATE HOUSE TOUR OFF. (2001), https://www.in.gov/gov/files/BillintoLaw.pdf [https://perma.cc/JE63-PAU9] (explaining that a bill dies in the Indiana legislature if it is not approved by the full Senate).

121. Sarah Bowman, *"Like a Hostage Negotiation": Indiana Bill on Renewable Energy Standards Dies After Pushback*, INDYSTAR (Apr. 15, 2021), https://www.indystar.com/story/news/environment/2021/04/15/indiana-general-assembly-kills-bill-wind-solar-energy-standards/7222252002 [https://perma.cc/D5VZ-G77G].

122. *See infra* notes 317–18 and accompanying text; *see also* Whitney Downard, *Renewable Energy Fight Continues in Indiana*, HERALD BULL. (Dec. 15, 2021), https://www.heraldbulletin.com/news/renewable-energy-fight-continues-in-indiana/article_34acfe32-5de8-11ec-818d-33f8f9e5ae30.html [https://perma.cc/SJ8A-WEZM] (detailing Rep. Soliday's concerns for future sustainable energy demand).

B. LITIGATION

Litigation over the development of commercial wind farms in particular started in the Indiana counties in 2013, accounting for about half of wind farm-related cases in the state to date.[123] All but one of the conflicts over wind development have resulted in civil suits, the exception being a Randolph County man charged with criminal recklessness and intimidation for allegedly "firing gunshots in a bid to frighten workers installing wind turbines near his home."[124] Neighbors opposing the projects have brought Fifth Amendment claims[125] and claims of violations to

123. Lawsuits involving wind energy have been a fixture in Indiana for almost as long as commercial wind farms themselves. Since Indiana's first commercial wind project opened for operation in 2008, there have been at least eighteen cases related to wind energy filed in Indiana courts. These cases have addressed conflicts over everything from energy purchasing agreements to the installation of residential turbines, workplace injuries, and financing and contractual disputes. *See, e.g.*, Wind Wire, LLC v. Finney, 977 N.E.2d 401, 401 (Ind. Ct. App. 2012) ("Wind turbine buyers brought action against turbine installer, alleging that installer fraudulently induced them to execute a contract for the purchase and installation of a residential wind turbine and that it breached that contract's implied warranty of fitness for a particular purpose."); Hamby v. Bd. of Zoning Appeals, 932 N.E.2d 1251, 1251–52 (Ind. Ct. App. 2010) (reviewing Warrick County neighbors' challenge of the Board of Zoning Appeals' approval of a height variance for the installation of a residential wind farm); Carson v. ALL Erection & Crane Rental Corp., 811 F.3d 993, 994–95 (7th Cir. 2016) (worker injured on-site at wind farm development sued equipment rental company); Sterett Crane & Rigging, LLC v. White Constr., Inc., No. 1:16-cv-00094-JMS-DML, 2017 WL 1197290, at *1 (S.D. Ind. 2017) (involving a claim of breach of Service Agreement when a crane was damaged while moving from one site of the wind project to another); Reinforcing Servs. Co., LLC v. Whaley Steel Corp., No. 90A02-1410-PL-764, 2015 WL 1740279, at *1–2 (Ind. Ct. App. 2015) (unpublished table decision) (involving an interstate project financing controversy dismissed for lack of personal jurisdiction); Carson v. E.On Climate & Renewables, 154 F.Supp.3d 763, 763 (S.D. Ind. 2015) ("Worker who worked on contractor's crane management team at a wind farm brought action against wind farm owner, alleging negligence and breach of duty of care to provide a safe workplace to contractor's employees. Defendant moved for summary judgment."); Parrish v. Purcell, No. 68A05-1705-DR-1128, 2017 WL 6391643, at *1 (Ind. Ct. App. 2015) (unpublished table decision) (involving a dispute over division of wind farm landowner lease payments dictated in marital settlement agreement).

124. *See* Douglas Walker, *Modoc Man Charged with Shooting at Wind Turbine Workers*, MUNCIE STAR PRESS (Nov. 17, 2020), https://www.thestarpress.com/story/news/crime/2020/11/17/modoc-man-charged-shooting-wind-turbine-workers/6321921002 [https://perma.cc/SB7C-9FVN].

125. *E.g.*, Complaint for Declaratory Judgment at paras. 17–19, Baker v. Cass Cnty., No. 09C01-1801-PL-000001 (Cass Cir. Ct. Jan. 17, 2018) (arguing that the minimum setback requirements in local Wind Energy Conversion Sys-

local zoning ordinances.[126] For many of these challengers, concerns over diminished property values and the limitation of property use imposed by reciprocal setback requirements (setback minimums that are measured from residential structures rather than property lines and which restrict landowner use of property) have become major rallying cries.[127]

In response, companies with thwarted wind projects have alleged breach of contract,[128] biased[129] and prejudicial zoning decisions,[130] unlawful zoning requirements beyond those set in the local ordinances,[131] improper voting procedures,[132] and violations of Indiana's Open Door Law due to improper county-level decision-making processes.[133]

Most of this litigation has been fruitless before the courts, with affirmative defenses raised for the running of statutes of

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tem ordinance result in a taking in violation of the Fifth Amendment); Complaint for Declaratory Judgment at paras. 14–16, Smith v. Miami Cnty., No. 52C01-1801-PL-000020 (Miami Cir. Ct. 2018).

126. Dunmoyer v. Wells Cnty., 32 N.E.3d 785, 791 (Ind. Ct. App. 2015) (citations omitted) ("[T]he Development Plan failed to comply with flood plain management; to present a traffic management plan; to enter into contracts with utilities or political entities to install or extend necessary services; and to comply with performance standards of air, water, waste matter, and fire protection.").

127. *See* discussion of Wells and Tipton County cases *infra* notes 140–43, 153–76 and accompanying text.

128. *E.g.*, Complaint for Declaratory and Injunctive Relief, and for Damages at 1–3, Sugar Creek Wind, LLC, v. Montgomery Cnty., No. 1:19-CV-04761 (S.D. Ind. Dec. 3, 2019) (alleging that the county breached their agreement to facilitate development of a wind-powered electric generation facility by adopting ordinances that made the project impossible).

129. *E.g.*, Verified Petition for Judicial Review of Zoning Decision and Complaint for Violation of Open Door Law at paras. 42–49, Prairie Breeze Wind Farm, LLC v. Tipton Cnty. Zoning Bd. of Appeals, No. 80C01-1308-PL-000301 (Tipton Cir. Ct. Aug. 30, 2013).

130. *E.g.*, *id.* at paras. 35–41; Complaint for Declaratory and Injunctive Relief, and for Damages, *supra* note 128, at 2.

131. *E.g.*, Verified Petition for Judicial Review of Zoning Decision and Complaint for Violation of Open Door Law, *supra* note 129, at paras. 39–40; Complaint for Declaratory and Injunctive Relief, and for Damages, *supra* note 128, at 2–3; Amended Appellant's Brief at 21–22, Flat Rock Wind, LLC v. Rush Cnty. Area Bd. of Zoning Appeals, 70 N.E.3d 848 (Ind. Ct. App. 2017) (No. 70A01-1606-PL-1382).

132. *E.g.*, Verified Petition for Judicial Review at paras. 7–8, 13, Big Blue River Wind Farm, LLC v. Henry Cnty. Bd. of Zoning Appeals, No. 33C01-1912-MI-000213 (Henry Cir. Ct. Dec. 6, 2019).

133. Verified Petition for Judicial Review and Complaint for Violation of Open Door Law, *supra* note 129, at paras. 50–58.

limitation,[134] failure to exhaust all administrative remedies,[135] and for lack of standing,[136] among others. One breach of contract case ended in a settlement.[137]

A strong theme that emerges in Indiana is deference to county commissions and county councils. In Indiana, as in a majority of the states, this deference to county-level decision making is known as "home rule," and it is the basis on which counties are bestowed with the legislative power (with few exceptions) to make their own local zoning decisions, rather than seating that power at the state legislature.[138] Both of the two conflicts over the zoning of commercial wind farms that have been considered by the Indiana Court of Appeals were decided in favor of county zoning board discretion, one involving a county's denial of a permit, and the other a county's approval of a project.[139] Describing the outcome of the 2015 case out of Wells County, one legal observer noted:

> Although the Court of Appeals affirmed and remanded the case to the lower court with instructions, the takeaway from the case is still the same–[local] plan commissions have the overall authority over plan-

134. *E.g.*, Defendants' Answer and Affirmative Defenses to Plaintiff's Verified Petition for Judicial Review of Zoning Decision at 2, Prairie Breeze Wind Farm, LLC v. Tipton Cnty. Zoning Bd. of Appeals, No. 80C01-1308-PL-000301 (Tipton Cir. Ct. Oct. 28, 2013); Answer to Verified Petition for Judicial Review and Affirmative Defenses at 2, *In re* Henry Cnty. Bd. of Zoning Appeals' Decision Regarding Big Blue River's Application for a Comm'n Approved Use Permit, No. 33C01-1912-MI-000213 (Henry Cir. Ct. Jan. 29, 2020); Order Dismissing Complaint at 1–2, Mosburg v. Bd. of Comm'rs, No. 21C01-1603-PL-00144 (Fayette Cir. Ct. Dec. 12, 2016) (dismissing claim for lack of subject matter jurisdiction and failure to state a claim on which relief can be granted).

135. Answer to Verified Petition for Judicial Review and Affirmative Defenses, *supra* note 134, at 2.

136. *E.g.*, Smith v. Miami Cnty., No. 52C01-1801-PL-0020 (Miami Cir. Ct. Aug. 24, 2018) (citing Motion to Dismiss at 1, Smith v. Miami Cnty., No. 52C01-1801-PL-000020 (Miami Cir. Ct. Apr. 16, 2018)); Brief in Support of Motion to Dismiss at 1, Baker v. Cass Cnty., No. 09C01-1801-PL-000001 (Cass Cir. Ct. Mar. 12, 2018).

137. *See* Order Directing Filing of Documents Authorizing Dismissal at 1, Sugar Creek Wind, LLC v. Montgomery Cnty., No. 1:19-CV-04761 (S.D. Ind. Dismissed Aug. 13, 2020) (dismissing due to stipulation from parties).

138. *See generally supra* Part III.A.

139. Flat Rock Wind, LLC v. Rush Cnty. Bd. of Zoning Appeals, 70 N.E.3d 848, 850 (Ind. Ct. App. 2017) (regarding denial of a zoning permit); Dunmoyer v. Wells Cnty., 32 N.E.3d 785, 797 (Ind. Ct. App. 2015) (regarding a challenge to an approval of a project).

> ning decisions in their jurisdiction. This affirmation indirectly supports the 'home rule' concept in Indiana and may reduce future challenges to Plan Commission decisions.[140]

Furthermore, adherence to home rule by Indiana courts may make the state more attractive to wind energy developers, at least in some instances.[141]

However, that same case also came with a small win for Wells County landowners concerned about reciprocal setback requirements. The landowners claimed that "the reciprocal setback provision in Article 15 of the Zoning Ordinance was invalid and should be stricken from the Zoning Ordinance because it constituted a taking of private property without just compensation."[142] The trial court held that "the Reciprocal Setback provision . . . is declared invalid and should be stricken from the Zoning Ordinance . . . ."[143]

In order to highlight the differing social climates and legal conflicts concerning wind development in the State, this Part will now proceed with a more detailed exploration of three cases, arising in Benton, Tipton, and Henry counties. These cases, together with the full body of wind energy caselaw in Indiana, point to potential mechanisms for addressing the controversies that are commonly arising in the face of proposed wind energy projects. These tools will be discussed in Part V, and include increasing transparency, inviting community members into plan-

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140. Mary Solada, *Recent Indiana Court of Appeals Ruling Affirms Plan Commission's Authority to Make Own Planning Decisions*, LEXOLOGY: BINGHAM GREENEBAUM DOLL BLOG (June 9, 2015), https://www.lexology.com/library/detail.aspx?g=144a7b04-6931-4ee2-83c5-2e719157f29d [https://perma.cc/RY4B-6MLE].

141. *Id.*

142. *Dunmoyer*, 32 N.E.3d at 791 (citing Appellants' Brief at 251, Dunmoyer v. Wells Cnty., 32 N.E.3d 785 (Ind. Ct. App. 2015) (No. 90A02-1407-MI-00460)). Setbacks are requirements that wind turbines be placed no closer than a specified distance from any structure, or property line, as the case may be. *Id.* at 788. Reciprocal setbacks apply equally to all land, whether it is the land on which the wind turbine is situated or neighboring land. *Id.* For neighbors, reciprocal setbacks are viewed as an unjust restriction on their land use, often imposed with no compensation. *See id.* at 791.

143. Dunmoyer v. Wells Cnty., No. 90D01-1309-MI-0023, slip op. at 9–10 (Wells Super. Ct. 2014), *aff'd*, 32 N.E.3d 785 (Ind. Ct. App. 2015). It is important to note that neither party challenged that portion of the trial court's ruling on appeal, so it remains unclear if claims over reciprocal setbacks would be successful in the Indiana Court of Appeals. *See Dunmoyer*, 32 N.E.3d at 797 (disregarding the reciprocal setback issue explicitly as it was not raised on appeal).

ning and decision-making processes, and augmenting the economic benefits shared with recipient communities.[144]

1. Benton County

Benton County, the birthplace of Indiana's commercial wind industry, collected $4.3 million in 2019 from wind farm property taxes alone.[145] The Benton County Wind Farm first opened in 2008 and the county has since welcomed an additional five projects, all together accounting for 560 turbines.[146]

Controversies over wind energy development in Benton County have been minimal, and this is further affirmed by the litigation arising in the county. In Benton County, there has not been any litigation on the development of wind farms or zoning ordinances. Instead, the two wind energy-related cases arising in Benton County dealt with the sale of the energy produced.[147]

2. Tipton County

While the first wind farm to be constructed in Tipton County was not contested, regrets over its effects on the local community and landscape set the stage for legal battles in Tipton County. The Wildcat I Wind Farm began operation in 2012 without much

144. *See* discussion *infra* Part V.

145. Bednarikova et al., *supra* note 19, at 4.

146. *Id.* at 13 tbl.1.

147. *E.g.*, Benton Cnty. Wind Farm LLC v. Duke Energy Ind., Inc., 843 F.3d 298, 298–99 (7th Cir. 2016); Mullett v. Duke Energy Ind., LLC, 103 N.E.3d 661, 662–64 (Ind. Ct. App. 2018). The plaintiffs in the former case claimed breach of contract for Duke's failure to purchase wind energy generated in excess of the electrical grid's transmission capacity, and for failure to cooperate with the company in marketing its energy. *See* Complaint at 1–6, *Benton Cnty. Wind Farm LLC*, 843 F.3d 298 (7th Cir. 2016) (No. 1:13-cv-1984-SEB-TAB), 2015 WL 10937443 (S.D. Ind. July 8, 2015). The Court ultimately held that, under the contract, Duke Energy was required to pay the wind farm for its unaccepted output generated in excess of the electrical grid's transmission capacity, but not for energy that the wind farm could have produced but for grid's order that it stop production. *See Benton Cnty. Wind Farm LLC*, 843 F.3d at 298. In 2018, ratepayers brought a related suit against Duke Energy and the Indiana Office of the Utility Consumer Counselor, requesting review of the Utility Regulatory Commission's approval of Duke Energy's decision to pass along the costs of the earlier settlement on to Duke's ratepayers. *See Mullett*, 103 N.E.3d at 662–63. The Indiana Court of Appeals decided in favor of the defendants, affirming the Regulatory Commission's "decision to authorize Duke's recovery from ratepayers." *Id.* at 666.

contention and is still operating today, with property tax revenues of $2.14 million over the last eight years.[148] Local officials recognize the beneficial economic impact the project has had on the county since its opening, and yet many have shared a deep sense of remorse for their involvement in the approval process.[149]

Jane Harper, a former county commissioner, expressed regret for playing a role in the approval of the earlier Wildcat I Wind Farm project, which she described as a "'windfall' to a few, but a curse to many."[150] Jerry Acres, President of the BZA during the subsequent Prairie Breeze permit application process, also expressed his regret for having approved the Wildcat I Wind Farm project: "This has gotten personal in that I will be honest with you, on Eon [Wildcat I Wind Farm] I didn't do my homework. I have a friend that lives out there and I stood on their property, and I tell you what, it was not—what you see is what you get and it wasn't what I anticipated."[151]

The Prairie Breeze Wind Farm, which would have been operated by juwi Wind, was the second development pursued in the County and proposed a $300 million investment which would include as many as ninety-two wind turbines.[152] It became the locus of the first major conflict over the development of commercial wind farms in Indiana when Prairie Breeze Wind Farm, LLC filed claims against the Tipton County BZA in 2013 for their handling of Prairie Breeze's permit requests in Tipton County.[153]

In a closed board session that followed a Tipton BZA meeting considering the approval of a permit for the development of the Prairie Breeze project, the impact of the proposed development on surrounding property values was expressed as a key

148. Gerber, *supra* note 32.

149. *See id.* (quoting local officials and residents).

150. *Id.* (quoting Jane Harper, Opinion, *Hard Lessons Can Be Learned from Tipton Co. Wind Turbine Project*, PHAROS TRIB. (Dec. 6, 2017), https://www.pharostribune.com/opinion/columns/article_9575ea76-5364-514c-b541-943730e47444.html [https://perma.cc/MNU8-PKSJ]).

151. Closed Session Meeting Transcript, Tipton Bd. of Zoning at Appeals at 28–29 (Mar. 20, 2013) (on file with authors).

152. Ken de la Bastide, *Juwi Files Lawsuit Against Tipton Co. Board of Zoning Appeal*, KOKOMO TRIB. (Sept. 5, 2013), https://www.kokomotribune.com/news/local_news/juwi-files-lawsuit-against-tipton-co-board-of-zoning-appeal/article_1496eaa7-fee1-5f49-9b0a-4faaeeb3bc56.html [https://perma.cc/5FY3-CQNE].

153. Verified Petition for Judicial Review and Complaint for Violation of Open Door Law, *supra* note 129, at paras. 37–38.

concern.[154] The BZA initially requested a conditional property value guarantee to attach to the wind farm.[155] In Prairie Breeze Wind Farm's Request for Modification of the Conditions, the company proposed a Property Value Protection Plan as an alternative.[156] The Protection Plan included compensation for diminished property value for all properties within the "Project footprint," (3/4 of a mile from any turbine) but rejected the Board's suggestion of guarantees for all property owners within a three-mile radius of the development.[157] The Plan would have provided compensation for lost property values greater than 10% for the first sale of the property, starting six months after the "Commercial Operation Date and continuing for five years thereafter."[158]

The BZA's Conditional Use Permit for the Prairie Breeze project also included a minimum 1,500-foot setback from property lines.[159] The active ordinance at that time required a minimum setback of 1.1 times the turbine height from the nonparticipating landowner, which plaintiffs claimed would have resulted in a setback of only 527 feet for the 479-foot wind turbines.[160] Prairie Breeze's request for modification thus also included a request for eliminating the heightened setback requirements created by the BZA,[161] instead requesting 1,400 feet from non-participating residences and 750 feet from property lines.[162] This was critical for the company, which noted that "with the 1,500-foot property line condition, there are zero turbine locations possible and zero acres of developable land."[163] The request for the modification of the conditional permit was denied by the Board,

154. Closed Session Meeting Transcript, *supra* note 151, at 24–34.

155. *Id.* at 37.

156. Exhibit E: Modification of Conditions from Conditional Use Permit CO-V-01-13, at 13–16, Prairie Breeze Wind Farm, LLC v. Tipton Cnty. Zoning Bd. of Appeals, No. 80C01-1309-PL-000308 (Tipton Cir. Ct. Sep. 4, 2013).

157. *Id.* at 14.

158. *Id.* at 18.

159. Exhibit G: Tipton Cnty. Bd. of Zoning Appeals Meeting Notes, at 1–4, Prairie Breeze Wind Farm, LLC v. Tipton Cnty. Zoning Bd. of Appeals, No. 80C01-1309-PL-000308 (Tipton Cir. Ct. Sep. 4, 2013).

160. Verified Petition for Judicial Review of Zoning Decision and Complaint for Violation of Open Door Law, *supra* note 129, at para. 39.

161. Exhibit E: Modification of Conditions from Conditional Use Permit CO-V-01-13, *supra* note 156, at 13–14.

162. *Id.* at 7.

163. *Id.* at 5.

a move that ultimately led to the BZA's denial of the permit and the ensuing lawsuit.[164]

Jerry Acres cited a lack of transparency in the preparations for the permit request as a serious issue, stating that "the deals should be brought to [the Board] at birth, not a day before graduation:"[165]

> But my concern is this, the fairness of this whole deal, I mean here it is we come in and we afford you two years to put together a deal and I am not going to say secretive, but it is definitely under the radar. I have sat on this board for two years and I wasn't fully aware of it. And now we turn around at a point in time and say, hey, we are ready to go to this board, and now we question if we have fair zoning or we have financial influence on zoning. I have some real problems with that process. Is it fair to ask our citizens to run down to city hall or the county building every time they hear something when part of the preliminary details are not fully disclosed? I have got a problem with that. . . . I think the county was in the legal aspect, I think they followed the letter of the law, but I don't see the fairness of it, I really don't.[166]

Participating landowners (landowners who had signed contracts to permit wind turbines to be constructed on their property) and the wind farm executives in turn expressed frustrations with a perceived lack of accountability and transparency in the BZA's decision-making process. When they filed suit, the Complaint noted the lack of opportunity for the project representatives and participating landowners to provide their arguments against property value guarantees at the public hearing on the BZA's conditional use permit.[167]

Petitioners, Prairie Breeze Wind Farm, brought suit in Tipton County claiming violations of Indiana's Open Door Law,[168] charging Jerry Acres with being "biased or prejudiced or otherwise unable to be impartial" in violation of Indiana Law,[169] and

164. *See* Verified Petition for Judicial Review of Zoning Decision and Complaint for Violation of Open Door Law, *supra* note 129, at para. 40–41.

165. Closed Session Meeting Transcript, *supra* note 151, at 20.

166. *Id.* at 18.

167. Verified Petition for Judicial Review of Zoning Decision and Complaint for Violation of Open Door Law, *supra* note 129, at paras. 52–57.

168. IND. CODE § 5-14-1.5 (2022).

169. Verified Petition for Judicial Review of Zoning Decision and Complaint for Violation of Open Door Law, *supra* note 122, at para. 42 (citing IND. CODE § 36-7-4-909 (2013)).

alleging that the Board's decision was "arbitrary . . . [and] capricious."[170] They sought judicial review, a ruling that the BZA decision was void, and a reversal of the Board's ruling.[171] In their Answer, the BZA claimed that the statute of limitations had run for the petition for judicial review, and as a result the Petitioners failed to state a claim upon which relief could be granted.[172] Ultimately, the parties stipulated to dismissal, and the case was dismissed with prejudice.[173]

There were two remarkable features of the Prairie Breeze Wind Farm legal conflict. The first was the perception on each side that the other had been non-transparent. On the one hand, the BZA, and its President in particular, believed the wind farm developers had put together their project "under the radar" and out of sight of non-participating landowners and county officers.[174] On the other hand, the wind developers believed the BZA had acted illegally in making public decisions in violation of Indiana's Open Door Law.[175] The other notable feature of this conflict was Prairie Breeze's willingness to propose a Property Value Protection Plan, which would have compensated property owners within 3/4 miles of any turbine for diminished property values greater than ten percent, even if they rejected the Board's request for guarantees for all property owners within a three-mile radius of the development.[176]

While litigation was underway, Tipton County amended its wind ordinance to unconditionally require the 1,500-foot setback from property lines and 2,640 feet from non-participating residences for all wind projects.[177] Eleven months into the litigation,

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170. *Id.* at para. 38.

171. *Id.* at 13 para. a.

172. *See* Defendants' Answer and Affirmative Defenses to Plaintiff's Verified Petition for Judicial Review of Zoning Decision and Complaint for Violation of Open Door Law, *supra* note 134, at 1–2.

173. Stipulation of Dismissal at 1, Prairie Breeze Wind Farm, LLC v. Tipton Cnty. Bd. of Zoning Appeals, No. 80C01-1308-PL-000301 (Tipton Cir. Ct. dismissed Aug. 26, 2014) (renumbered No. 80C01-1309-MI-000301).

174. *See supra* note 166 and accompanying text.

175. *See supra* notes 168–70 and accompanying text.

176. *See* Ken de la Bastide, *Prairie Breeze Moving Forward*, KOKOMO TRIB. (May 27, 2013), https://www.kokomotribune.com/news/local_news/prairie-breeze-moving-forward/article_781f0e53-d4d1-57ef-9f81-4eb182e070bb.html [https://perma.cc/C5XR-BJHS].

177. Bednarikova et al., *supra* note 19, at 28–29; Ken de la Bastide, *Tipton County Changing Future Wind Farm Setbacks*, KOKOMO TRIB. (Aug. 24, 2013), https://www.kokomotribune.com/news/local_news/tipton-county-changing

the company ended development efforts.[178] In a statement on the company's subsequent exit from the county, President of juwi Wind, Mike Martin, noted "[w]ithdrawing from a late-stage development project is always a difficult decision—especially when the development work has complied with all substantive and procedural regulations, and juwi has had the support of dedicated and civic-minded landowners and other community members who championed the merits of this project."[179]

During a 2021 Indiana Senate Utility Committee Hearing for HB 1381,[180] John Cardwell, a Tipton County farmer, longtime policy advocate, and proponent of the proposed legislation, provided testimony on the impacts of the failed development:

> In 2012 and 2013 in Prairie Township where my farm is that I manage today with my wife, we had about 40 to 50 people who worked two years negotiating with a wind farm company we had thoroughly vetted. We spent $50,000 on attorneys of our own money to put that together. We had county commissioners support it. And when we got to the last step, which is the local zoning board of appeals, we had a public hearing, and about 300 people from outside Tipton County showed up and raised holy hell and made all kinds of wild and crazy charges about what was going on . . . But they didn't stop there . . . they tried to intimidate our people in our township. . . . And we lost that, and that was a $300 million . . . projected investment over 25 years.[181]

In the wake of the lawsuit, Jerry Acres stated that "[o]ur objective during this entire process was to ensure that the ordinances of Tipton County were upheld and to preserve the integrity of the BZA."[182] The Prairie Breeze project was never constructed and the Wildcat I Wind Farm remains the only operational wind project in the County to date.[183]

3. Henry County

In 2019, Big Blue River Wind Farm, LLC applied to the Henry County Planning Commission for a commission-approved use (CAU) to build thirty-eight turbines.[184] In August of that

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-future-wind-farm-setbacks/article_2d541f5a-613c-5957-aef6-980588fb95f7.html [https://perma.cc/ZY5M-UBVU].

178. Fitch, *supra* note 32.

179. *Id.*

180. *See supra* Part III.A.4.

181. *Hearing on H.B. 1381 Before the S. Comm. on Utils.*, 2021 Leg., 122d Sess. (Ind. 2021) (statement of John Cardwell).

182. Fitch, *supra* note 32.

183. Bednarikova et al., *supra* note 19, at 13 tbl.1.

184. Application of Big Blue River Wind Farm, LLC, Henry Cnty. Plan. Comm'n Case No. B2228 (Sept. 19, 2019) (Findings of Fact and Decision).

year, a vote on the CAU ended in a 4-4 tie (with one recusal), and in September the Planning Commission "approved a 'Findings of Fact' that the CAU was officially denied because it had not received enough votes."[185] In November, the Henry County BZA voted to uphold the denial.[186]

The next month, the wind farm filed a petition for judicial review alleging, in part, that the proper Henry County voting procedures were not followed during the initial Planning Commission vote and that the BZA's subsequent decision to uphold the vote was "contrary to the evidence before the BZA, the local Rules of Procedure, and Indiana law."[187] Three towns, Greensboro, Cadiz, and Kennard, joined the case as intervening parties,[188] claiming "[t]he effects of the proposed [project] on the citizens of the respective towns for whom the ordinances were adopted, in the event the decision of the Board of Zoning Appeals is modified or reversed, will be significant and directly affect the health and property values of those citizens."[189] All parties stipulated to the case's dismissal on March 19, 2020.[190]

Henry County, like many counties in Indiana and the Midwest, has deflected the attention of wind companies. To date, no wind farms have been permitted in that part of the state.

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185. Travis Weik, *Wind Farm Suing Zoning Board*, COURIER-TIMES (Dec. 20, 2019), https://www.thecouriertimes.com/news/wind-farm-suing-zoning-board/article_5b5302ce-376f-591d-a379-1f556cd3c6f7.html [https://perma.cc/AD3D-KVZ3].

186. Exhibit C to the Petition for Judicial Review: Staff Report, Henry Cnty. Bd. of Zoning Appeals, C: 2322 BBRWF Administrative Appeal of Case B: 2228, Big Blue River Wind Farm, LLC v. Henry Cnty. Bd. of Zoning Appeals, 33C01-1912-MI-000213 (Henry Cir. Ct. 2020) (recommending denial); Exhibit D to the Petition for Judicial Review: Official Letter RE: Henry County Board of Zoning Appeals Case C: 2322, at 1, *Big Blue River Wind Farm, LLC*, 33C01-1912-MI-000213 (confirming denial).

187. Verified Petition for Judicial Review, *supra* note 132, at paras. 13–15.

188. Order Granting Motion to Intervene, *Big Blue River Wind Farm, LLC*, 33C01-1912-MI-000213

189. Motion to Intervene at para. 3, *Big Blue River Wind Farm, LLC*, 33C01-1912-MI-000213.

190. Travis Weik, *Case Dismissed: Wind Farm Drops Judicial Review Request*, COURIER-TIMES (May 19, 2020), https://www.wind-watch.org/news/2020/05/20/case-dismissed-wind-farm-drops-judicial-review-request [https://perma.cc/V82N-PVGS].

IV. COMMUNITY RESISTANCE AND CONFLICTS

This section details our fieldwork. It describes county-level efforts to maintain local control over wind-energy regulations, often with the effect of inhibiting the construction of wind farms. It provides insights into the community-level organizing and political machinations that have created obstacles or outright blocks on future wind farms in a number of counties throughout Indiana.

The findings described in this Article are the result of desk-based research conducted in 2020 and 2021, as well as fieldwork conducted throughout Indiana during 2021. Our initial research on Indiana's wind farms illuminated widespread and strong community resistance throughout the state. We therefore decided to focus our attention on two types of conflicts: the community conflicts that appear in newspapers (often during the period of time that either new projects or new county ordinances to regulate commercial wind farms are under consideration) and legal conflicts appearing in court records. Of course, these two types of conflicts are sometimes interwoven. This initial research led us to the names of lawyers, county officials and economic development officers, company representatives, and community-based anti-wind farm organizers who could potentially serve as contacts.

Having completed prior empirically informed research on the effects of proposed natural resource projects on local communities,[191] the authors were committed to conducting qualitative fieldwork in order to better understand the sources of community resistance to wind farm development. In addition, the authors were particularly interested in learning how law serves as a tool (or acts as an obstacle) for that resistance and the roles law can play in achieving a happier balance between resistant communities and wind energy. This Part discusses the findings of that fieldwork and is the basis for the recommendations found in Part V.

There are six primary drivers of community-based resistance to wind farms taking root in rural Indiana, and likely in the rural United States.[192] By far the four most strongly felt

191. *See, e.g.*, OTRA COSA NO HAY, *supra* note 21; *Contracts on the Seabed*, *supra* note 21; Christiana Ochoa, *Generating Conflict: Gold, Water and Vulnerable Communities in the Colombian Highlands*, *in* NATURAL RESOURCES AND SUSTAINABLE DEVELOPMENT (Celine Tan & Julio Faundez eds., 2017).

192. While the emphasis on one or another driver of resistance varied from county to county, or from interlocutor to interlocutor, each of these factors was

sources of resistance are concerns about: (1) poor process; (2) the substance of the deals that are struck for wind farms, and with whom they are struck; (3) the inevitable viewscape changes wrought by wind farms; and (4) the impacts on property values. Other frequently cited reasons to resist commercial wind farms which this Article will not explore in detail are (5) the potential health consequences of living in range of "blade flicker" and turbine sounds, and (6) the negative effects for flying animals. This Part will discuss each of these factors in turn, with particular attention to where law has some ability to intercede.

A. "WE GOT STEAMROLLED . . . WE KEPT FEELING LIKE IT WASN'T LEGAL"[193]

Without question, the most pervasive feature of our interviews throughout Indiana is that the process by which wind developers engage with communities causes resistance, resentment, anger, and long-lasting community divisions. The deals struck for leases and options, county ordinances, economic development agreements, tax abatements, etc., are widely perceived as secretive, non-transparent, non-inclusive, and offering insufficient opportunities for participation in the design of projects and in the decisions over whether and how they may proceed in a given location.

With only one exception,[194] we found that the early stages of wind farm development are perceived as intentionally secretive, with the goal of tilting county officials and the powerful, often-absentee owners of the largest farms strongly in favor of establishing the prospective wind farm. "The big farmers wanted to sign up early. The vast majority of the people that signed up don't live on the land. For example, one farmer signed up 49 turbines without regard to his tenants."[195] "They go first to the largest, most prominent landowner in the area. He's always the most despised."[196]

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present in each location.

193. Interview 203 with Anti-Wind Organizer (June 16, 2021) (on file with authors) For a discussion of landlord tenant farmers, see *infra* notes 245–51 and accompanying text.

194. *See infra* Part V.C.

195. Interview 202 with Anti-Wind Organizer (June 14, 2021) (on file with authors).

196. Interview 502 with Former Economic Development Director, *supra* note 2.

According to one person we spoke with, lease options (which typically give wind farm operators up to five years to install turbines on a parcel) do not have to be recorded with the county government.[197] This allowed companies to negotiate land-lease options, as well as negotiate the basic terms of any tax abatement, economic development agreement, etc., and necessary changes to the county zoning ordinance, without notice to the community or participation from the local population.[198] "Companies were always working in the background, making promises and getting leases."[199] There is evidence that companies used "unique tactics" in getting leases signed.[200] Company lease-negotiators were described as inexpert, seemed guarded, oversold the upsides, and, in one instance, coaxed one farmer to sign a lease under the false pretext that their immediate neighbor had agreed to put in three turbines, only later to discover that this was untrue.[201]

"The result is that [we] didn't know until the deals were all but done—very late in the game . . . . Three wind projects were going by the time we learned of them."[202] "The companies have a pattern. They were there for years before we even knew about it."[203] By the time a broad pool of residents learned that a wind farm may be established in their county, they felt (or were explicitly told) "it's a done deal."[204]

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197. Interview 801 with Attorney (June 10, 2021) (on file with authors).

198. *Id.* As a lawyer that has worked with anti-wind organizers in a number of Indiana counties, this interviewee was focused on patterns of behavior. He also stated that "wind companies are . . . approaching county commissioners early on to give them simple ordinances regarding setbacks and noise. They get all those approved so when the company comes in, they've got a clear path to a wind farm." *Id.*; *see also* Interview 201 with Anti-Wind Organizer, *supra* note 1 (expressing frustration, not with wind technology per se, but with the methods employed by wind companies to secure agreements in rural communities).

199. Interview 801 with Attorney, *supra* note 197.

200. Interview 201 with Anti-Wind Organizer, *supra* note 1.

201. *Id.* These tactics are described as having caused a lot of resistance among community members.

202. Interview 204 with Anti-Wind Organizer (Sept. 20, 2021) (on file with authors). Typically, the Anti-Wind contingent in a county first formed when a landowner was approached for a lease option and contacted their neighbors, realizing that there must be others who had also been approached. In each case we know this happened, the process for establishing the wind farms was well underway by the time the community learned "through the grapevine" that lease options had been signed.

203. Interview 203 with Anti-Wind Organizer, *supra* note 193.

204. Interview 202 with Anti-Wind Organizer, *supra* note 195.

The people with whom we spoke reported feeling that "we were always running behind the clock,"[205] trying to learn the process for effective participation in local county governance, which in each instance was described as byzantine. Community residents described the county governance process as complex and often felt as though it was used to exclude those opposed to wind farms.[206] One lawyer with whom we spoke said, "Companies often proceed by getting all the leases signed up, then file petitions once everything is in order. Sometimes, there's only 10 days' notice before the zoning hearing. [This] gives communities very little time to react."[207] With so little time, some described frustration with how difficult it was to get information in time for meaningful participation.[208]

County officials were described as shading the full truth of their intentions,[209] or recognizing only the positive aspects of prospective wind farms.[210] Residents suspected corruption or skewed decision making: "The wind company was smart enough to wine and dine to [sic] county commissioners. It was a done deal from the get-go."[211] "We were effectively going up against a multi-billion-dollar company. We couldn't win."[212] One group of anti-wind organizers resorted to knocking on the door of every home in the Northern portion of the county slated for a wind farm.[213] Of at least 235 people with whom they spoke, eighty-three to eighty-five percent were against the wind farm.[214] When the group attempted to submit this information to the county, it was repeatedly rejected for being out of keeping with established rules or practice.[215] This inability to present the evidence they had assembled regarding community sentiments toward a wind project caused the anti-wind farm contingent to feel intentionally shut out from the decision-making process.[216]

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205. Interview 203 with Anti-Wind Organizer, *supra* note 193.

206. *Id.* ("We had no voice, no representation, no reporting.").

207. Interview 801 with Attorney, *supra* note 197.

208. Interview 202 with Anti-Wind Organizer, *supra* note 195.

209. Interview 203 with Anti-Wind Organizer, *supra* note 193.

210. Interview 202 with Anti-Wind Organizer, *supra* note 195.

211. *Id.*

212. Interview 203 with Anti-Wind Organizer, *supra* note 193.

213. Interview 202 with Anti-Wind Organizer, *supra* note 195.

214. *Id.* (stating there were 235 petition responses and eighty-five percent against); Interview 203, *supra* note 193 (stating there were 396 petition responses with eighty-three percent against).

215. Interview 203 with Anti-Wind Organizer, *supra* note 193.

216. *Id.*

In a few counties, anti-wind organizers pooled their efforts and their money to hire lawyers,[217] with many using the same law firm from Northern Indiana. In some instances, legal assistance was pivotal in slowing or halting wind farms. In other counties, the legal representation was described as helpful but insufficient: "We had the sense the commission was not going to follow the rules.[218] Our lawyer made sure they followed the rules . . . . We got steamrolled. We would have gotten steamrolled further and faster and cheaper without a lawyer."[219]

County hearings to discuss how permissive or restrictive ordinances would be for wind farms (and effectively deciding whether wind farms would be permitted) were described as "super emotional confrontations,"[220] with or without the assistance of legal counsel. Distrust, intimidation, rancor, and fear appear to permeate these community meetings. Parties both for and against wind farms described people from outside the county showing up in droves to these events,[221] such that they felt the atmosphere was "moblike."[222] One person described "a lot of rudeness in both directions."[223] There is often the feeling that "[i]f you play nice you lose."[224] In this tense environment, anti-wind activists report "feeling like we had to be careful."[225]

The cumulative effect of the approach companies and county officials have taken in many Indiana counties is that people who

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217. Interview 801 with Attorney, *supra* note 197.

218. This is a concern shared in other instances as well. *See, e.g.*, Interview 204 with Anti-Wind Organizer, *supra* note 202.

219. Interview 203 with Anti-Wind Organizer, *supra* note 193.

220. Interview 801 with Attorney, *supra* note 197.

221. Interview 203 with Anti-Wind Organizer, *supra* note 193; *see also* Interview 502 with Former Economic Development Director, *supra* note 2.

222. Interview 203 with Anti-Wind Organizer, *supra* note 193.

223. Interview 204 with Anti-Wind Organizer, *supra* note 202; *see also* Derrik Thomas, *Henry County Commissioner Accused of Cursing During Public Meeting*, WRTV ABC INDIANAPOLIS (Apr. 14, 2017), https://www.wrtv.com/news/local-news/henry-county-commissioner-accused-of-cursing-during-public-meeting [https://perma.cc/CHH8-54JA] ("What began as a meeting about the controversial wind farm project in Henry County, ended with another big topic of discussion when attendees accused one of the county commissioners of cursing at the audience.").

224. Interview 202 with Anti-Wind Organizer, *supra* note 195.

225. Interview 203 with Anti-Wind Organizer, *supra* note 193. One interviewee told me that there were days she was concerned about her car being rigged with a car bomb. Interview 204 with Anti-Wind Organizer, *supra* note 202. In one case, a county officer committed suicide, with speculation that the tensions around wind farms were a contributing factor. *Id.*

might have been agreeable or neutral on wind farms turned against them. "The main first catalyst for resistance was the approach of the prospectors to the landowners. I believe that people took a relatively reasonable approach at first."[226] But the process was seen as "arrogant, and the community reacted negatively. These things tend to get talked about over morning coffee more than any benefits [the community might receive]."[227] One interviewee summed up his feelings about the process by saying: "I'm not anti-wind. I'm anti-how-it-was-done-here."[228]

B. ORGANIZED OPPOSITION: "IT STARTS WITH A RING-LEADER, THEN EIGHT TO TEN PEOPLE, THEN HUNDREDS."[229]

Residents, tenant farmers, and neighbors all have reasons to oppose wind farms. When opposition to wind farms takes hold in a particular county, it often does so with force, garnering large numbers of county residents to the anti-wind farm camp. In each county we studied, concerned citizens quickly formed into anti-wind organizations, meeting in homes, community churches, and library meeting rooms. "It starts with a ring-leader, then eight to ten people, then hundreds."[230] They used Facebook to share information and to garner support, both from within and outside of the county. Social media[231] and other websites[232] facilitate sharing and dissemination of information state- and nation-wide.

This phenomenon is common because, in each instance, the majority of the county's residents are unconvinced that the benefit they will receive is commensurate with the perceived harm

226. Interview 201 with Anti-Wind Organizer, *supra* note 1.

227. *Id.*

228. *Id.*

229. Interview 502 with Former Economic Development Director, *supra* note 2; *see also* Interview 204 with Anti-Wind Organizer, *supra* note 202; Interview 203 with Anti-Wind Organizer, *supra* note 193.

230. Interview 502 with Former Economic Development Director, *supra* note 2.

231. *See, e.g.*, *No Wind Farm*, FACEBOOK, https://www.facebook.com/NoWindFarm [https://perma.cc/WA3L-MEPC]; *Wayne County Indiana Against Industrial Wind Turbines*, FACEBOOK, https://www.facebook.com/groups/1572869106326838 [https://perma.cc/YKG5-ZCNF]; *Save Jasper County*, FACEBOOK, https://www.facebook.com/pulaskiandjaspercountyinpropertyrights [https://perma.cc/CH58-GE7E].

232. *See, e.g.*, WIND WATCH, https://www.wind-watch.org [https://perma.cc/GLB7-QG7B].

they expect from wind farms. The majority of the energized opposition is usually located in the most rural parts of the county, where the wind farms are typically slated for construction. As we described above, in at least one county as many as eighty-five percent of the most-affected residents were opposed and felt they had no means to affect decisions or extract at least some benefit to mitigate the harm they experience from the wind farm that now stands in that part of Indiana.[233]

Those who oppose wind farms, regardless of where they reside in the county, are skeptical that the economic development agreements negotiated between companies and county governments are sufficient to compensate for the prolonged tax abatements counties grant to companies, at least in the short term. In one county, the average tax rate for wind turbines hovered between 0.97% and 1.58%.[234] In another, the effective tax rate for the initial seven years after construction was 0%.[235] In exchange for the tax abatement, the company agreed to pay $8 million to the county's economic development corporation over a ten-year period.[236]

In one Indiana county, the economic development corporation intends to use funds to increase access to broadband internet across rural areas of the county.[237] While this may be a benefit to rural residents, it is also a necessity for wind turbines to function optimally.[238] The same can be said of most road improvements made by wind operators. While rural county residents benefit from the better roads, they also notice that only the

233. Interview 202 with Anti-Wind Organizer, *supra* note 195; Interview 203 with Anti-Wind Organizer, *supra* note 193. Interviewees complained of other ways they felt shut out of the process, including being precluded from speaking for longer than three minutes at meetings or speaking with county officials outside of meetings. *Id.*

234. Benton Cnty. Assessor's Off., Benton County—Wind Turbine Taxes, Assessed Values, and Residential Properties (on file with authors).

235. Interview 501 with County Commissioner (June 16, 2021) (on file with authors).

236. *Id.*

237. *Id.*

238. *See* Michael Lanre Adekanbi, *Optimization and Digitization of Wind Farms Using Internet of Things: A Review*, 45 INT'L J. ENERGY RSCH. 15832, 15833 (2021) ("[The internet of things] supports real-time monitoring of wind farm, detection of faults ahead of time, better grasp of the operation pattern of the wind farm, as well as reduction in operation and maintenance cost conjoined with an increase in lifespan of the wind turbine.").

roads used by the company to install or service turbines are improved.[239] The rest remain in their prior state, causing residents to wonder whether there is any compensation truly made to them in exchange for the harms they experience, or whether the "benefits" are really company requirements, wrapped in a bow and ribbon. This leaves residents asking, "What's in it for the town?"[240]

For those who reside in the portion of counties where wind farms are slated to be built, their concern is much deeper. Many farmers in this part of the country have long, inter-generational connections to their land, some dating back over 200 years.[241] Indiana's Hoosier Homestead program recognizes families with farms that have been owned by the same family for 100 years or more.[242] Over 5,000 family farms have been recognized through the Hoosier Homestead program.[243] It is not surprising that people with such long connections to the land might object strongly to the extremely changed landscape brought by wind farms.[244]

Fig. 2. A sign at the far edge of a farm designated as Hoosier Homestead. The farm now looks onto the many wind turbines on neighboring farms.

Tenant farmers on some of the largest farms in Indiana are among the most directly affected. Tenant farming, by which land

239. Christiana Ochoa, Photographs of Warren County, Indiana (June 16, 2021) (on file with authors).

240. Interview 502 with Former Economic Development Director, *supra* note 2.

241. *See Hoosier Homestead List*, IND. STATE DEP'T OF AGRIC., https://www.in.gov/isda/files/1976-2014_Hoosier_Homestead_List_pdf.pdf [https://perma.cc/E75P-88LM] (listing Hoosier Homestead farms, with one dating back as early as 1791, that were recognized by the Indiana government from 1976–2014).

242. *Hoosier Homestead,* IND. STATE DEP'T OF AGRIC., https://www.in.gov/isda/programs-and-initiatives/hoosier-homestead [https://perma.cc/7KWM-75WD].

243. *Id.*

244. *See* Fig. 2, *infra*.

is rented from absentee owners of large farms, has long been a feature of the rural United States.[245] In Indiana, photos dating back to the early twentieth century depict the unfavorable conditions in which tenant farmers have worked the land for at least a century.[246] Wind turbines are the most recent incarnation of the burdens born by tenant farmers. Our team repeatedly heard stories of large-farm absentee owners contracting with wind farm operators: "The big farmers wanted to sign up early. The vast majority of the people that signed up don't live on the land. For example, one farmer signed up for 49 turbines without regard to his tenants."[247] According to one interviewee, the largest landlord-farmer in one county we studied owns 30,000 acres.[248] For a tenant who might farm 800 acres, an agreement for forty-nine turbines might mean a reduction in fifty acres of farmable land,[249] and it will mean a highly altered landscape on which to live and work. Not surprisingly, the "leaders of the opposition are often tenant farmers."[250] Given that "the fiber of the opposition" is described as "landlord-tenant disputes," a useful question for future wind farm projects might be to thoughtfully ask, "What's in it for the tenant-farmers?"[251]

The neighbors of wind farms are also among the most aggrieved in recipient communities. There is a tendency among wind farm operators to characterize the source of opposition as "greed and jealousy about the leases" (and the money paid through the leases to their neighbors),[252] or purely a concern

245. *See generally* Leon E. Truesdell, *Farm Tenancy Moves West*, 8 J. FARM ECON. 443, 443 (1926) (detailing the phenomenon of farm tenancy in the early twentieth century).

246. Staff of the Ind. Mag. of Hist., *A Day in the Life of a Hoosier Tenant Farmer*, IND. PUB. MEDIA (Sep. 23, 2013), https://indianapublicmedia.org/momentofindianahistory/day-life-hoosier-tenant-farmer [https://perma.cc/CC9S-WUAD].

247. Interview 202 with Anti-Wind Organizer, *supra* note 195.

248. Interview 502 with Former Economic Development Director, *supra* note 2.

249. Turbines typically occupy approximately one acre of farmable land. George Duval, *How Many Wind Turbines Can Fit on One Acre?*, SEMPRIUS (Aug. 15, 2021), https://www.semprius.com/how-much-space-does-a-wind-turbine-need [https://perma.cc/5VJU-9D48].

250. Interview 502 with Former Economic Development Director, *supra* note 2.

251. *Id.*

252. Interview 503 with Former County Commissioner (June 29, 2021) (on file with authors); Interview 702 with Wind Farm Company Representative (Sept. 10, 2021) (on file with authors).

about "light flicker, noise and the view."[253] When our team first learned of "good neighbor agreements," we initially thought these might be mechanisms for compensating immediate neighbors for the degraded experience of living next to turbines extending hundreds of feet into the sky. Rather, we learned that they are arrangements by which the company pays a neighbor to waive through private contracts the minimum offsets, maximum noise, or shadow of flicker levels set in county ordinances. Good neighbor agreements are only offered to landowners from whom such a waiver is necessary to install turbines where the company's computer-generated turbine siting model has determined they would be best sited.[254] They are not offered to all neighbors, or even to those on directly neighboring land with turbines as close as permitted by the county ordinance.

Fig. 3. Benton County, Indiana, farmhouse surrounded by wind turbines.

253. Interview 501 with County Commissioner, *supra* note 235.

254. The location of turbines is typically determined by a computer-generated modeling system after wind studies have been completed and leases signed with the necessary landowners in the region. Interview 701 with Company Representative, *supra* note 3.

C. "IT'S LIKE LIVING IN AN INDUSTRIAL ZONE"[255]

The result is that people who have lost wind farm battles (or never fought them) have seen their surroundings transformed from rural countryside and farmland with wide-open vistas to large-scale, industrial energy-production facilities. Some Indiana counties now host hundreds of wind turbines, together with new transformer stations and a system of large and obtrusive transmission towers and lines used to carry electricity over long distances. The extent of this transformation is impossible to fully capture if one has not been on the ground in the middle of a commercial wind farm.

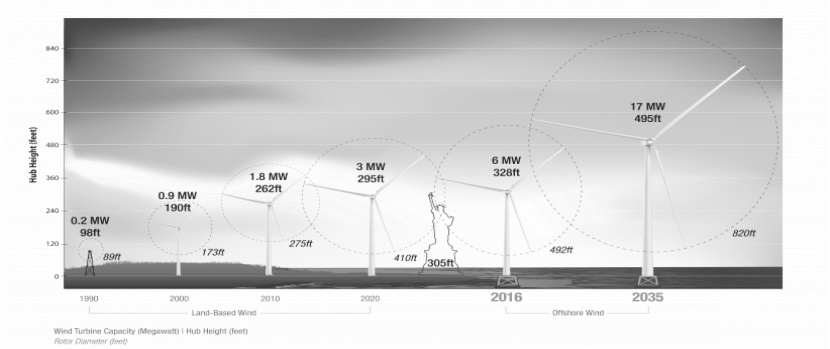

Fig. 4.[256] Demonstrating growing wind turbine hub heights over time.

The earliest commercial wind towers erected in Indiana from 2008–10 have hub-heights of eighty meters (approximately 262 feet above the ground).[257] Their blades typically extended to between 275 and 324 feet—often exceeding the height of the Statue of Liberty or Big Ben.[258] From 2012 onward, wind towers grew significantly, hitting hub heights over eighty meters.[259] Blades got longer during this period as well.[260] By 2020, the total average height of onshore wind turbines was 410 feet, nearly the

255. Interview 203 with Anti-Wind Organizer, *supra* note 193.

256. Off. of Energy Efficiency & Renewable Energy, *Wind Turbines: The Bigger, the Better*, U.S. DEP'T OF ENERGY (Aug. 16, 2022), https://www.energy.gov/eere/articles/wind-turbines-bigger-better [https://perma.cc/6NEX-TL23].

257. Bednarikova et al., *supra* note 19, at 13 tbl.1.

258. *See Wind Turbines: The Bigger, the Better*, *supra* note 256.

259. *Id.*

260. *Id.*

height of the London Eye Ferris Wheel and about four-fifths of the height of the Washington Monument (at 555 feet tall).[261]

Fig. 5. Wind turbines at the horizon in Warren County, IN.

On a clear day, one catches the first glimpse of these taller turbines from about seven miles away.[262] From within a three-mile radius of the wind farms, they are the most obvious features on the landscape.

261. *See id.*

262. The authors have taken note of the distance from wind farms at which they can first spot them.

Fig. 6. Wind turbine under construction in Benton County, IN. A close look provides perspective on the height of the turbine relative to a large truck at the turbine's base.

All our visits with people directly involved in wind farm conflicts occurred during the day. Our photographs are thus also all daytime photographs. To understand the experience of living on land now occupied by a large-scale wind farm, however, one must imagine a bright, blinking red light on the top of each wind turbine (these are necessary and required for air safety). One also must imagine that blinking red light as a permanent and constant feature of the nighttime landscape. One couple we talked

with said it was "horrifying the first time we saw the towers at night."[263]

Fig. 7. Lines of wind turbines in close proximity to a family farm in Warren County, IN.

D. "HOW CAN THEY NOT BE HURTING PROPERTY VALUES?"[264]

One of the leading concerns expressed by communities contemplating wind farms is the effect they may have on property values. The conclusions in the literature on the effects of wind farms on property values are mixed. This literature is summarized well elsewhere and is beyond the scope of this article.[265] Some studies, especially those studying the United States, find no significant negative impact of wind farms on property values.[266] Others do find a significant negative impact, especially where turbines are visible or sound from turbine operation is audible.[267] Perhaps most interesting is a study indicating that the

263. Interview 203 with Anti-Wind Organizer, *supra* note 193.

264. Interview 202 with Anti-Wind Organizer, *supra* note 195.

265. *See* Bednarikova, *supra* note 19, at 50–52.

266. *See, e.g.*, *id.* at 50 (citing Hoen, B., Brown, J., Jackson, T., Thayer, M., Wiser, R. & Cappers, P., *Spatial Hedonic Analysis on the Effects of U.S. Wind Energy Facilities on Surrounding Property Values*, 51 J. REAL EST. FIN. & ECON. 22 (2015)). This is consistent with our research. *See* Benton Cnty. Assessor's Off., *supra* note 234 (indicating increased property values in Benton County in the time since wind farms were established there).

267. *See, e.g.*, Bednarikova, *supra* note 19, at 50 (citing Jensen, Panduro & Lundhede, *The Vindication of Don Quixote: The Impact of Noise and Visual Pollution from Wind Turbines*, 90 LAND ECON. 668, (2014)).

community attitude toward wind farms is a strong predictor of their effect of property values. Where communities have voiced no opposition to the establishment of wind farms, property prices rise, though not enough to be statistically significant.[268] On the other hand, where communities have received wind farms despite notable opposition, properties located within about two and a half miles of a turbine tend to drop between five and ten percent.[269]

This helps to explain why—especially when we talked with wind farm objectors—concern for property values was such a prevalent source of distress. In one such community with declining populations, one person with whom we spoke insisted that any study claiming that property values are not affected must be flawed: "Property value studies don't include homes that don't sell."[270] Another wind objector asked: "How can they not be hurting property values when a lot of people are moving away because they don't like the turbines?"[271]

E. OTHER CONCERNS

Other reasons for opposing wind farms relate to shadow flicker (the notable light flicker created by the shadow of rotating turbines). Shadow flicker is regulated in many commercial wind turbine ordinances, often allowing, for example, a specified number of hours of shadow (and therefore potential flicker) on neighboring residences.[272] This issue fuels communities opposing windfarms because there are videos available through the internet of shadow flicker inside homes that would, for most people, be distressing.[273]

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268. Benton Cnty. Assessor's Off., *supra* note 234.

269. *Id.*

270. Interview 204 with Anti-Wind Organizer, *supra* note 202.

271. Interview 202 with Anti-Wind Organizer, *supra* note 195.

272. *See, e.g.*, Richard Lampeter, *Shadow Flicker Regulations and Guidance: New England and Beyond*, NEW ENGLAND WIND ENERGY EDUC. PROJECT 3 (Feb. 10, 2011), https://windexchange.energy.gov/files/pdfs/workshops/2011/webinar_shadow_flicker_lampeter.pdf [https://perma.cc/KN98-LPVF] (describing types of limits applied to shadow flicker); Interview 501 with County Commissioner, *supra* note 235.

273. *See e.g.*, betterplanWI, *Wind Turbine Shadow Flicker and Noise, Byron Wisconsin*, YOUTUBE (Aug. 17, 2008), https://www.youtube.com/watch?v=iyOImGHyJtQ; Matthias Metzger, *Shadow Flicker*, YOUTUBE (Aug. 27, 2017), https://www.youtube.com/watch?v=OQksc1-5Zoc; Blackwater Wind Aware, *Living with Wind Turbine Flicker—Effects in the Home*, FACEBOOK (Nov. 1, 2018),

Sounds from wind turbines also have a notable effect on those living close enough to hear them. On a visit to an Indiana wind farm, one of the author's children stated while listening to the sound of a wind turbine: "This seems like a rural person's problem," a sentiment that is less bluntly reiterated by people with whom we have spoken who have not lived in the relative quiet of rural land. It is important to recognize, however, that for rural residents, the incessant sound of turning turbine blades is new, unwelcome, and truly is a problem.[274]

Finally, the ecological effects of wind farms are another source of concern. The large amounts of concrete and rebar used below the earth to stabilize turbines, the effects on weather, and the effects on bats and birds are among the most prevalent environmental and ecological worries for opponents of wind farms.[275]

F. THE RESULTS: SLOWER TRANSITIONS TO CLEAN ENERGY, DISTORTED ELECTORAL POLITICS, AND BROKEN COMMUNITIES

The authors have lived in the Midwest for a substantial portion of their lives.[276] We have heard this part of the country referred to as "flyover land" many times. We know that it would be easy to regard these problems as simply "rural people's problems" or otherwise not important enough to regard seriously. But there are at least three reasons to heed the concerns driving opposition to wind farms, and the strength with which they are felt.

1. Transitioning to Renewable Energy Will be Slower and More Difficult

Opposition to wind farms is shutting down the United States' ability to realize its commitment to reduce its reliance on

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https://www.facebook.com/BlackwaterWindAware/videos/living-with-wind-turbine-flicker-effects-in-the-home/246030656068107.

274. For videos demonstrating the sound, see *supra* note 273. County ordinances regulating commercial wind turbines regularly include sound level maximums. Like all such provisions, ordinances vary with respect to where they set the maximum audible decibel levels and at what distance. *See, e.g.*, WARREN CNTY. IND. ZONING ORDINANCE § 1.7.3 (Nov. 5, 2012).

275. *See, e.g.*, Nasimul Eshan Chowdhury, Mahmudul Alam Shakib, Fei Xu, Sayedus Salehin, Md Rashidul Islam & Arafat A. Bhuiyan, *Adverse Environmental Impacts of Wind Farm Installations and Alternative Research Pathways to Their Mitigation*, 7 CLEANER ENG'G & TECH. 100415, https://doi.org/10.1016/j.clet.2022.100415 (discussing ecological and environmental impacts of wind farm installations).

276. One of us grew up in Indiana wind country just twenty minutes from the Meadow Lake Wind Farm.

non-renewable energy. It is also impeding the global drive to rapidly and dramatically reduce fossil fuel consumption and increase renewable energy production. In Indiana, for example, more than thirty of the state's viable wind energy counties have passed ordinances[277] effectively or actually prohibiting wind farms in their boundaries. The same is occurring in other wind-viable states.[278]

2. Local Politics and Elections are Distorting

Second, the political battles occurring within counties are corrosive to local governance and may well be an indicator of local politics over the coming decade.[279] Sociologists of disasters have recently turned to studying opposition to wind farms, likening them to the "Corrosive Communities" breaking down after a technological disaster, such as toxic chemical spills, nuclear contamination, etc.[280] Such communities are under extreme stress caused by uncertainty about the harm the disaster has or will bring upon the community. In these situations, it is not unusual for communities to take on corrosive characteristics. Communities break down because of three key stressors:

> The first is the perception of an ongoing threat to human health. The second is "recreancy," a technical term in sociology that refers to the feeling that experts and institutions can't manage the new risks created by technological development. The third is litigation. These characteristics feed on each other. A heightened perception of risk leads people to wonder why experts and institutions aren't doing their jobs. A sense of recreancy tends to generate litigation. Litigation raises awareness of risk. Such communities may be harmed as much or more by the social dynamics . . . as they are by the disaster itself.[281]

277. Miller, *supra* note 109.

278. Nderitu, *supra* note 29, at 37 ("With the rapid expansion of utility scale wind farms in Indiana and across the U.S., resistance has arisen in some communities resulting in the writing of local government ordnances restricting their installation in some counties.").

279. Joseph Bernstein, "*Corrosive Communities": How a Facebook Fight Over Wind Farms Predicts the Future of Local Politics in America*, BUZZFEED (Dec. 17, 2021), https://www.buzzfeednews.com/article/josephbernstein/facebook-groups-wind-turbine-construction [https://perma.cc/798J-AE74] (conveying how the arrival of a wind company to a Michigan county mobilized the community into local politics for the purpose of opposing the proposed project).

280. *Id.* (citing William Freudenburg, *Contamination, Corrosion, and the Social Order: An Overview*, 45 CURRENT SOCIO. 19 (1997), https://doi.org/10.1177/001139297045003002).

281. *Id.*

A team of sociologists applying this concept to communities opposing wind farms finds that the Corrosive Community framework is useful in understanding the disintegration many such communities experience, even in the absence of a natural or technological disaster.[282]

Our own fieldwork confirms these findings. Wind farm opposition groups became highly organized and cohesive among themselves. In small communities, this type of mobilization is unusual and has resulted in many county-level elections being characterized as "single issue elections" for the purpose of ensuring anti-wind farm ordinances will be passed in the period immediately following elections. In one eastern Indiana county, a wind farm opponent led us through their political mobilization strategy. In the end, she said, "We won the 2018 election by a landslide. . . . We pretty much infiltrated."[283]

Some more moderate voices, even if they were opposed to wind farms, worry that the prominence of wind farms as the sole issue in elections is not good for local government. "Our county government is substantially different as a result of wind farms. Incumbents are losing even to unknown people with no experience. At least three County Council seats have been turned over on that issue."[284] For the authors, this raised concern about the effects that single-issue elections have on local governance.

3. Local Communities are Suffering

Finally, there is the enduring erosion of the quality of life brought by living in a peaceful community. Even years after the fight over wind farms has been won or lost (depending on the result and one's perspective), communities continue to suffer. Some interlocutors described feeling threatened even four years after a contentious vote over wind farms.[285] Many people lamented that their community has not returned to its previous

282. Joshua Fergen, Jeffrey Jacquet & Ritvik Shukla, *"Doomscrolling" in My Backyard: Corrosive Online Communities and Contested Wind Development in Rural Ohio*, 80 ENERGY RSCH. & SOC. SCI., 102224 (2021), https://doi.org/10.1016/j.erss.2021.102224.

283. Interview 204 with Anti-Wind Organizer, *supra* note 202.

284. Interview 503 with Former County Commissioner, *supra* note 252.

285. Interview 204 with Anti-Wind Organizer, *supra* note 202 ("We are all under a microscope. They are trying to take us down.").

levels of peace and civility. Individuals describe their own continued enmity over the issue.[286] At least ten people our team hoped to speak with declined, indicating that they preferred not to re-open emotional wounds. Families are described as still divided in cases where they took different positions on wind farms.[287] Simply put, people feel a continued loss of the cohesiveness they once enjoyed: "*We are not broken, but our community is broken.*"[288]

V. RECOMMENDATIONS ROOTED IN RESISTANT COMMUNITIES

This Article began with a quote from a multi-generation farmer who operates a large feed mill operation in rural Indiana. Until a wind farm was constructed surrounding his land, the large grain silos were the tallest and most industrial feature on the landscape in his part of the county. He is not opposed to economic development, to changes in economic production in his region of Indiana, or even to wind farms. When he told us: "I am not anti-wind. I am anti-how-it-was-done-here,"[289] he was expressing a sentiment shared by a number of the anti-wind farm organizers with whom we spoke. These conversations provide vital clues for the viability of future wind energy developments. The operators of these developments must learn how to better engage with and offer more handsome deals to the rural communities on which the United States' transition to renewable energy relies.

A. THEORETICAL PREMISE: INTERVENTIONS IN CONTRACT FORMATION

The current practices of wind companies in local communities are not working and will slow or restrict a transition to a sustainable energy grid. The predominant model for community engagement and the substance of the agreements that follow does not create long and durable relationships with many com-

286. *See e.g.*, Interview 501 with County Commissioner, *supra* note 235 ("I have to choose not to be mad every day.").

287. Interview 204 with Anti-Wind Organizer, *supra* note 202.

288. Interview 203 with Anti-Wind Organizer, *supra* note 193; *see also* Fergen et al., *supra* note 282.

289. Interview 201 with Anti-Wind Organizer, *supra* note 1.

munities they approach, nor does it make such relationships substantively attractive. In fact, as Part IV described, it does quite the opposite.

The proposals presented here are informed by two bodies of literature. Contracts scholars have long argued that determining the correct scope for state intervention in the context of incomplete, or relational contracts, is essential to articulating a cogent theory of contract law.[290] This discourse focuses on *ex-post* questions about contract interpretation and asks: what is the role of the state when incomplete contracts are breached?[291] Our proposals here are deeply informed by this literature but focus on the moment of contract formation—the *ex-ante* moment. Informed by our fieldwork, the proposals aim to articulate the appropriate role of the state in two crucial aspects of the deals between companies and communities. First, they identify the roles the state can play in incentivizing companies to engage communities through means that will be more likely to facilitate trust. These proposals attend to the deal-making process. They also articulate tools governments can employ to incentivize substantively beneficial and agreeable deals between companies and communities.

The proposals herein also draw on previous scholarship related to the role of formal[292] versus informal institutions,[293] especially in tight-knit communities. Authors have long provided rich empirical descriptions of the limits of formal law within tight-knit communities. Ellickson's rancher conflicts in Shasta County[294] and Bernstein's extracontractual relations in the diamond industry[295] were surprising examples of innovations within those communities to accomplish the goals we associate with law while also maintaining the social fabric in places where the formal legal system might cause it to fray. Each provide important insights on the limits and limitations of formality in law. Our fieldwork led us to quite different observations. Rather than a tendency toward informality, the communities from which we

290. *See* Robert Scott, *The Case for Formalism in Relational Contract*, 94 NW. U. L. REV. 847, 847 (2000) ("[T]he central task in developing a plausible normative theory of contract law is to specify the appropriate role of the state in regulating incomplete contracts.").

291. *Id.*

292. E.g., legally enforceable contracts or courts.

293. E.g., socially important agreements or socially imposed consequences.

294. Ellickson, *supra* note 6.

295. Bernstein, *supra* note 279.

learned seemed to yearn for more formal, transparent, well-articulated, and durable deal-making and agreements. In this context, formality opens possibilities for durable relationships in tight-knit communities and can serve as a catalyst for long-term renewable energy projects.

To create sustainable deals for wind farms, outsider companies must engage communities early, transparently, respectfully, and generously to credibly propose mutually beneficial relationships. These proposals have a high bar to meet: the process by which agreements are reached has to build trust such that communities are at least willing to enter relationships with the companies that may last a generation or more. The proposals have to be attractive enough that communities can envision how the burden they will bear—an irreparable transformation of their land into an industrial power plant—is sufficiently compensated in the renewable energy transition.

Attractive wind development proposals from companies will include a transparent and engaging process that involves communities as well as enhanced financial compensation to landowners, tenants, neighbors, larger communities, and residents' children. Recommendations for improving the process of these deals follows.

B. RECOGNIZING THE BURDEN

One feature we noted in our conversations with wind farm resisters is that they believe they are perceived as unreasonably or irrationally attached to the aesthetics of "the view,"[296] caught up in what was sometimes characterized as "their greed,"[297] or jealous of their neighbors who wind up with lucrative leases.[298] This strategy of taking what is dear to a community and diminishing its value is an ongoing demonstration of the reason companies are having trouble establishing in America's heartland. None of these portrayals adequately capture what we learned from talking with wind farm objectors. This image of local communities and the land surrounding them sets up an unlikely tableau for establishing trust and shared goals.

Many of the people with whom we spoke were deeply rooted in the rural land on which they lived, sometimes for multiple

296. Interview 501 with County Commissioner, *supra* note 235.

297. Interview 503 with Former County Commissioner, *supra* note 252.

298. Interview 702 with Wind Farm Company Representative, *supra* note 252.

generations. They are understandably devoted to the landscape and environment they have known their entire lives and have an attachment to the idea that their children will grow up seeing the same sunsets, the same clear sky, and the same stars on a dark night from the roof of their barn.[299] Their well-being and life satisfaction stands to be diminished significantly by the presence of tens or hundreds of wind turbines stretching to the horizon. This is plain to them. These deals will only be more patient, more honest, and fairer, if this burden is more fully recognized and publicly acknowledged.

C. IMPROVING THE PROCESS

So many of the people with whom we spoke spent most of our conversations detailing what, for them, was a terrible experience with wind farm operators and, in some cases, also with county officials. They told us about companies whose mode of operation was intentionally secretive, such that leases were signed and county meetings for approvals of ordinances, etc., had already been scheduled by the time they learned that a wind farm was proposed in their county. They also remarked on how little opportunity there was for participation in official county meetings, even when those meetings were the only venue to voice their concern or opposition. They were skeptical about the information the companies presented to the communities, and disturbed that information they had gathered independently was not allowed into county-level discussions. In some cases, this resulted in successful vies for county government seats, which then led to prohibitive ordinances or moratoria. In others, it led to defeat, and our conversations happened in the shadow of towers stretching hundreds of feet into the air and far into the horizon. In either event, it led to mutual resentment, fear of persecution and violence on both sides of the debate, and enduring intra-community strife. This is hardly the stuff of enduring relationships.

Within the wind industry, we have learned of only one company experimenting with a community engagement model similar to what we propose here.[300] Our conversations with the innovator who is spearheading that company's effort are reflected in

299. Interview 203 with Anti-Wind Organizer, *supra* note 193.

300. Interview 701 with Company Representative, *supra* note 3.

these recommendations,[301] as are the recommendations and suggestions we received from the people we've learned from in the course of this research.

1. Registering Interest and Reporting Process

Before a company sends employees or contracts with another party to offer leases to landowners in a particular county, the company should be required to publicly register its interest in developing a wind farm in that county. County officials could be required to report any such registration at the next possible public meeting. Any company that has registered interest in a given county could be required to submit a short report of any steps taken during the prior quarter toward the realization of their interest. County officials could, in turn, be required to relay those reports at quarterly public meetings. This process would give community members notice that companies are working toward signing leases in their area and their rate of progress toward signing leases, proposing changes to ordinances, negotiating economic development agreements, etc.

2. Invite Engagement and Participation

Under the typical wind company model, companies: (1) look at technical maps to find a good location for a wind farm; (2) send people out to sign leases; (3) conduct environmental and other studies to determine viability and sign more leases; (4) use computer-generated models to determine the optimal location for turbines; and (5) go to the relevant county boards with fully developed plans.[302] Under a new pilot being conducted by one innovative company, the goal is to design a project that fits the requirements of the community.

As an alternative to the standard model, they intend to: (1) engage the community on what matters to them, what the community needs in order to allow the project, and how to structure the project; (2) work with the community on how to design the project (this includes identifying important locations, historical farms, etc. that should be protected and also provide community members with financial data that informs where turbines would be most effectively located); (3) take time to work through the concerns community members have and discuss the real trade-offs of, for example, economic development, revenue,

301. *Id.*
302. *Id.*

and funding for public projects in exchange for developing an industrial-scale wind farm in the county; and (4) give the community a one percent royalty on the project in addition to the taxes due, with the community empowered to decide who collects and administers these funds.[303]

Having observed that "trust-building is hard right now when everyone is determined not to trust,"[304] the question motivating this changed process is whether a robust and honest conversation with community members from the start of the project throughout its life can de-escalate the tensions that have swelled up around wind farms in rural America.[305]

In addition to these changes in normal operations, companies could invite any landowner in a county or targeted region of a county to inscribe for a lease option with the full understanding that the ultimate siting of wind turbines will be dependent on the design process the company will undertake with the community's help, as detailed above.

3. Transparent and Robust Information Sharing

Companies can be required to hold ongoing information sessions and two-way dialogues separate and ahead of formal county government decision points. These are valuable opportunities to share information in both directions and to dispel any miscommunication or information asymmetries that might exist between the parties. This will be necessary if communities are engaged by companies as described above.

County officials and companies should both be aware that the rules imposed by statutes such as Indiana's Open Door Law[306] have heightened importance when communities speculate that agreements are being struck between officials and companies in private backroom deals. Ensuring that decisions, and the discussions leading to them, are transparent is essential to building the trust necessary for communities to contemplate opening themselves to a long-term relationship with a wind farm.

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303. *Id.*

304. *Id.* This company's observations are hard-won, having been the subject of costly lawsuits and having seen many speculative projects rejected by local communities. *Id.*

305. *Id.*

306. IND. CODE § 5-14-1-1.5-1 (2022).

The need to remain transparent and share all relevant information will extend over the life of the relationship. Such information should include effects on property values, health effects, and effects on birds and bats. It must also include robust information on revenues paid and public projects funded as a result of the company's operations. In other words, companies would do well to see information sharing as a set of opportunities to build and maintain trust and confidence over time so that they are welcomed partners in the local communities where they set roots.

Among the greatest challenges our team faced was the inability to access first-hand information about the private contracts between landowners and companies establishing companies' rights to erect and operate wind turbines on particular parcels of property. Despite significant effort on our part, the penalties associated with the non-disclosure agreements included in these contracts acted as an impermeable shield between us and private landowners with turbines on their land.

The few copies of proposed leases[307] we received were transmitted to us almost as if they were contraband. Community members with whom we spoke corroborate the difficulty this poses for learning information that would be valuable in designing future wind farms. In places where people know one another and breakfast conversations at the diner are robust, this information gap is disconcerting and is a continual reminder of the fissures that feel as permanent as the wind turbines that created them. A path through this is more transparency, even with respect to the private agreements between companies and landowners. One possibility would be to require companies to submit the contracts to the county assessor or recorder, with permission to redact information vital to the company's competitive position in the market.

4. Spaces for Voicing Concerns

Public meetings are the most frequent site of antagonistic encounters between those in favor and those against the construction of wind farms in a given community. This is often unproductive and leads to a sense of repression, particularly for those attempting to block wind projects. The concept of "exit and

307. We distinguish these documents from "model" agreements shared with us because they were actually presented to landowners for consideration. None of the documents we have were actually signed by landowners. Consummated contracts were entirely elusive.

voice"[308] is a useful framework for understanding how the limited spaces for public conversations result in the highly contentious public meetings we heard so much about.

When the ability or will to exit (move to another county or to an urban location) is low, the propensity toward political action—voice—in the face of challenges such as the arrival of wind farms is elevated.[309] If that political action is limited or derided, it would be rational for communities to reject wind projects in order to avoid relating with them. This is clearly a more attractive alternative to moving. The companies are thus forced to exit, rather than the residents. County officials who are perceived as overly solicitous of wind companies are similarly being ousted (from office if not from the county) at the next elections. If this dynamic is to improve, company and incumbent county officials must open public spaces for community input, evidence, discord, and discussion, either through dialogue or through referenda that allow communities to peaceably and more-fully voice their concerns.

5. Lessons from International Development

Over the past decade, Free Prior Informed Consent (FPIC) has emerged as a mechanism in the foreign direct investment context designed to enhance the role communities have in negotiations over large-scale mining and development projects in much of the developing world.[310] The concept emerged to assist primarily indigenous communities in securing a role in striking

308. *See* ALBERT O. HIRSCHMAN, EXIT, VOICE, AND LOYALTY 19–20 (1970) (introducing "exit and voice" as an economic concept); *see also* Albert O. Hirschman, *"Exit, Voice, and Loyalty": Further Reflections and a Survey of Recent Contributions*, 58 MILBANK MEM'L FUND Q. HEALTH & SOC'Y 430 (1980) [hereinafter Hirschman, *Further Reflections*] (discussing "exit and voice" in management, political, and public service contexts); OLIVER P. WILLIAMS, METROPOLITAN POLITICAL ANALYSIS: A SOCIAL ACCESS APPROACH 29 (1971) ("There are essentially two options open for those who wish to employ a location strategy to change their access within the urban complex. They can move or they can change the characteristics of the place they presently occupy."). While Williams was referring to the choices available to urban dwellers, the same can be said of people in the heartland today.

309. *See* Hirschman, *Further Reflections*, *supra* note 308, at 448–50 (citing John M. Orbell & Toru Uno, *A Theory of Neighborhood Problem Solving: Political Action vs. Residential Mobility*, 66 AM. POL. SCI. REV. 471, 484 (1972)).

310. *See, e.g.*, Mauro Barelli, *Free, Prior, Informed Consent in the Aftermath of the U.N. Declaration on the Rights of Indigenous Peoples: Developments and Challenges Ahead*, 16 INT'L J. HUM. RTS. 1, 2–4 (2012) (explaining FPIC and its use by indigenous peoples).

(or denying) deals that would affect their ancestral lands and, in many cases, would eliminate their traditional cultures and livelihoods.[311] While FPIC has received merited criticism, the core principles at its heart have been very useful to our team as we consider how community engagement and relationships could be improved.

D. FAIR COMPENSATION

One consequence of not recognizing the burden local residents are asked to bear in the shift to a decentralized renewable energy grid is that the deals companies offer to communities are not perceived by local communities as adequately compensatory for all they stand to lose. The private lease contracts struck with individual landowners for leases are confidential, and the benefits redound only to the parties in privity to that agreement. Similarly, the "good neighbor" agreements signed by the immediate neighbors of turbines are also merely private agreements with individuals from whom the companies require a waiver of ordinance requirements.

The deals struck with county officials for tax abatements in exchange for payments to economic development funds do provide some compensation to communities, but it is not seen as enough. Communities recognized that, even if the community might benefit, these funds are often used for projects like road improvements and broadband internet that the companies require for their own project to function well.[312] Seen in this light, communities' desire for a better deal might be characterized, not as greedy, but rather as rational in a market economy in which the compensation for such an alteration in their local environment can only be made once it is monetized and offset by direct payments to the local community. Seen in this light, the payments communities might require reflect the value they attach to their rural lifestyles.

Each community will surely place different values on their agreement to transform into an industrial electricity generation

311. *Id.* Another lesson from international development is the development of small, distributed energy production, e.g., community-scale renewables or microgrids, which could mitigate cybersecurity concerns as well. *See generally* Julie C. Michalski, Note, *Microgrids for Micro-Communities: Reducing the Energy Burden in Rural Areas*, 26 MICH. TECH. L. REV. 145 (2019) (analyzing microgrids as a potential model for rural communities).

312. Interview 501 with County Commissioner, *supra* note 235.

location. And each community will likely place different emphasis on the public goods most wanting in their location. In any event, this is an opportunity to enhance libraries, schools, roads, medical care, fire stations, public buildings, parks, etc.

There are a variety of mechanisms for ensuring that communities receive enhanced public services, and perhaps even private payments, in exchange for permitting a wind farm to be established. While this Article will not explore each in detail, we do offer some possibilities below.

1. Contingent Tax Incentives and Abatements

The mistake on the part of the companies receiving tax incentives and abatements is to assume that the economic benefit from these programs should redound, in the largest part, to them. Rather, they should recognize that the incentives are for the purpose of ensuring the rapid growth of the wind energy sector. In order for this to happen, these economic incentives should be used to enrich the deals for communities contemplating new wind farms. If companies are not already doing so, they could consider passing a significant portion of the tax incentives they enjoy on to the communities that allow them to establish farms and operate.

Part I of this Article devoted some attention to discussing the federal and state tax incentives propelling the nation's conversion to renewable energy, and wind energy in particular.[313] If companies are not voluntarily seeing the utility of sharing the benefits of tax incentives, federal and state governments could force sharing by requiring companies to share a simple percentage of gross revenues or a substantial portion of the tax credit with host communities.[314]

Similarly, the tax credits for counties establishing Renewable Energy Districts (REDs) under legislation such as the failed Indiana HB 1381[315] could be supplemented by tax credits that directly benefit the residents of the REDs whose land is not the subject of a lease with a wind company. This would assure some benefit to the most immediate neighbors of wind turbines who

313. *See supra* Part I.

314. Email from Roberta Mann, Mr. & Mrs. L.L. Stewart Professor of Bus. L., Univ. of Oregon Sch. of L. to Leandra Lederman, William W. Oliver Professor of Tax L., Indiana Univ. Maurer Sch. of L. and author, Christiana Ochoa (July 1, 2021) (on file with authors).

315. *See supra* Part III.A.4.

are not receiving direct financial benefit from leases.[316] As of this writing, Indiana has gone in the opposite direction, making such payments highly unlikely. In 2022, when the Indiana legislature reopened deliberations on legislation to create consistency among counties and municipalities regarding wind energy ordinances, the original bill included a provision requiring payments to host communities.[317] However, by the time the bill was signed into law, such payments to local communities had been eliminated, representing a missed opportunity for this type of benefit to host communities.[318]

2. Categorical Grants

The federal government could also use categorical grants[319] for counties committed to engaged, transparent, and participatory wind farm permitting. Counties that are able to show their commitment to such processes leading to the establishment of a commercial wind farm could apply for project or formula-project categorical grants created specifically for this purpose.[320] State grants-in-aid can act as a mechanism for states to create similar incentives.[321] A grant program of this kind could create an environment for innovations in good process of the types we outlined in Part V.C.

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316. This would go a long way toward signaling that bills such as HB 1381 are not so much designed to facilitate the establishment of wind farms, but rather to facilitate the establishment of wind farms that respectfully engage and deal with communities in order to ensure sustainable deals in the heartland.

317. *See*, S.B. 411, 122d Gen. Assemb., 2d Reg. Sess., sec. 1, ch. 28.6, § 13(b)(2) (Ind. 2022) (as introduced, Jan. 12, 2022).

318. *See* Act of Mar. 11, 2022, Pub. L. No. 90-2022, 2022 Ind. Acts 742.

319. *Guide to Indiana County Government*, ASS'N IND. CNTYS. 34 (2009), https://www.pfw.edu/dotAsset/c78253c7-7f49-4d54-b3aa-6c44ccd4d8db.pdf [https://perma.cc/FK3G-XHRK]; *see also* ROBERT JAY DILGER & MICHAEL H. CECIRE, CONG. RSCH. SERV., R40638, FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS: A HISTORICAL PERSPECTIVE ON CONTEMPORARY ISSUES 8–12 (2019), https://sgp.fas.org/crs/misc/R40638.pdf [https://perma.cc/9YFC-G2AP] (discussing the federal government's historic use of categorical grants).

320. *See* DILGER & CECIRE, *supra* note 319. Categorical grants from the federal government are designed to benefit a specific national policy and are limited to a narrowly defined set of activities. Project categorical grants are awarded through an application process based on competitive criteria. Formula-project categorical grants typically are awarded to entities showing that they have met the criteria established in the legislation establishing the grant program. Such entities are eligible to apply through a competitive process among local governments able to show compliance. *Id.* at 2.

321. *Guide to Indiana County Government*, *supra* note 319, at 32–34.

3. Local Benefits

In 1969, in the era when the first-generation nuclear plants were expanding as a source for electricity generation, Lake Charter Township in Michigan, just over the Indiana border, decided to allow the Cook Nuclear Plant to be built within its borders.[322] In exchange, the local community received handsome financial benefits through local property taxes that directly benefited public schools.[323] From 1975 when it began operations until 1994, when a new Michigan law negated the arrangement,[324] Lake Township and its local school district in Bridgman, Michigan received funding sufficient to distinguish the rural school from its surrounding cohort.[325] The twenty years during which it was possible for the nuclear facility to make payments to Lake Charter Township continue to be recognized as vital to its economic development.[326]

This deal was struck with the local community in exchange for the license to operate in Lake Township, on the shore of Lake Michigan. Without this exchange, the Township would not have accepted the hazards inherent with becoming subsumed in the ten-mile radioactive "plume exposure pathway zone" of the electric plant's two nuclear reactors.[327]

In the context of the renewable energy imperative, it may be time to use or create paths for communities and companies to strike deals that assure that local communities will receive an enduring benefit in exchange for agreeing to see their county, or

322. Digit. Lagoon, *Cook Nuclear Plant*, UNITED SERV. ALL. (Dec. 4, 2018), https://www.usainc.org/usamembers/cook-nuclear-plant [https://perma.cc/KHG7-RLD9].

323. *Lake Charter Township*, BERRIEN CNTY. CMTY. DEV. DEP'T, https://www.berriencounty.org/DocumentCenter/View/276/Lake-Charter-Township-PDF [https://perma.cc/Q63L-8B5X] ("Today, thanks to the Cook Plant, Lake Township is one of the most prosperous communities in Berrien County.").

324. This precise arrangement would no longer be possible in Michigan due to the 1993 law that negated its effect. *See* Edward Walsh, *Michigan Ends Property Tax Funding of Schools*, WASH. POST (Aug. 20, 1993), https://www.washingtonpost.com/archive/politics/1993/08/20/michigan-ends-property-tax-funding-of-schools/1b0d11e1-c1f9-4ccf-8a2c-105a28029a73 [https://perma.cc/T6EC-FSAA] (reporting on the end of Michigan's property tax funding of schools).

325. *Cf. Lake Charter Township*, *supra* note 323 (listing school taxes for Bridgman School District next to other districts serving Lake Township).

326. *Lake Charter Township*, *supra* note 323.

327. *Donald C. Cook Nuclear Plant*, WIKIPEDIA, https://en.wikipedia.org/wiki/Donald_C._Cook_Nuclear_Plant [https://perma.cc/D49P-6UKN].

their region of the county, transformed into an industrial electricity generation facility.

4. Permanent Fund Dividends

A final model for assuring that local communities receive financial benefits in exchange for allowing wind farms in their borders can be found in examples such as the Alaskan Permanent Fund Dividend. The Permanent Fund Dividend is the result of a deal struck with Alaskan residents at the time the Alaska Pipeline was constructed.[328] It is designed to provide an "annual payment . . . for Alaskans to share in a portion of the State minerals revenue in the form of a dividend to benefit current and future generations."[329] Dividends of this form could enhance the bargain between wind companies and local communities. If adequately managed and responsibly funded, it would also contribute to enduring relationships between companies and communities.

CONCLUSION

"The low-hanging fruit is gone."[330]

The communities resisting wind farms in places like Indiana are often portrayed as the villains, inhibiting America's rapid transition to renewable energy.[331] Our fieldwork throughout Indiana complicates this characterization. The responsibility for establishing wind farms is shared between the companies proposing them and the communities targeted to receive them. National, state, and local governments can facilitate this shared responsibility by using the tools we have outlined herein[332] for the purpose of ensuring that the costs and benefits created by the disintegrated renewable energy grid are distributed fairly.

The empirically informed recommendations we have made here are not easily implemented. They would take time and

328. *See generally About Us*, STATE OF ALASKA: DEP'T OF REVENUE: PERMANENT FUND DIVIDEND, https://pfd.alaska.gov/Division-Info/About-Us [https://perma.cc/X2R3-RL5A] (providing an overview of the Permanent Fund Dividend).

329. *Id.*

330. Interview 701 with Company Representative, *supra* note 3.

331. *See supra* Part IV.

332. *See supra* Part V (detailing our proposals for postural, procedural, and substantive improvements in company dealings with local communities).

would be costly. They will also not always be successful. However, it is important to recall the reality into which we make these recommendations.

Climate change is arguably the greatest current global existential threat. Climate change is a scientifically established fact, and it has further been established that greenhouse gas emissions have and continue to play a fundamental role in global warming.[333] Still, according to a recent Intergovernmental Panel on Climate Change report, "a warming greater than 1.5°C is . . . not geophysically unavoidable: whether it will occur depends on future rates of emission reductions."[334] A rapid transition from fossil fuels to renewable energy is crucial to reducing greenhouse gas emissions and greatly increases the need for workable relationships between wind companies and rural communities.[335]

Recent reports by civil and environmental engineers outline the path to a one hundred percent carbon-free and nuclear-free energy grid by 2050.[336] In order to get there, states in America's heartland will have to increase their wind energy capacity by factors of ten and twenty. Indiana's onshore wind energy capacity, for example, would have to increase by sixteen times its current load.[337]

At the same time, the rural land suitable for wind farms in states like Indiana has largely become unviable due to local ordinances that restrict or prohibit their construction. With the

333. *See Special Report: Global Warming of 1.5 Degrees Celsius*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE ch. 1 https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SR15_Full_Report_HR.pdf [https://perma.cc/U6Q8-7DU5] (analyzing sources of and the threats of climate change).

334. *Id.*

335. *Id.* at ch. 2 (discussing potential solutions to slow climate change).

336. *See, e.g.*, Mark Z. Jacobson, Anna-Katharina von Krauland, Stephen J. Coughlin, Frances C. Dalmer & Miles M. Smith, *Zero Air Pollution and Zero Carbon from All Energy at Low Cost and Without Blackouts in Variable Weather Throughout the U.S. with 100% Wind-Water-Solar and Storage*, 184 RENEWABLE ENERGY 430 (2021) (analyzing the potential for a carbon-free country by 2050).

337. Mark Jacobson, *Zero Air Pollution and Zero Carbon from All Energy Without Blackouts at Low Cost in Indiana*, STAN. UNIV. tbl. 4 (Dec. 7, 2021), http://web.stanford.edu/group/efmh/jacobson/Articles/I/21-USStates-PDFs/21-WWS-Indiana.pdf [https://perma.cc/AT7M-EFAR] (indicating that Indiana's wind energy output would have to increase from the 2.46GW it produced in 2019/2020 to nearly 40GW).

"low hanging fruit" gone,[338] and a well-scripted "playbook" for local communities to resist wind farms,[339] it now seems that, with few exceptions, continuing to operate as companies have to date will lead to failed projects far more often than is necessary.[340] Importantly, this phenomenon is playing out in other windy states across the country and in rural spaces outside the United States.[341]

Fortunately, there are alternatives to the divisive dynamic emerging throughout rural America as local communities consider their role in the renewable energy transition. The recommendations we have made here have the benefit of ground-truthing. They offer tools to shift the process by which wind farms are being introduced to small communities, the form and extent of community involvement in decisions about wind farms in their midst, the benefits shared with local communities, and the protections and guarantees offered to those communities.

We do not mean to imply that all communities are open to wind farms. Very clearly some are not. Some of the anti-wind organizers with whom we spoke were opposed not just to the process, or to the compensation models companies offered them. They were opposed to having their environment transformed from open, quiet, rural farmland to an industrial electricity-generation facility. It is not clear that any amount of respectful process, community participation in planning, or compensation structure would be sufficient to assuage this strong form of resistance. In communities where this type of resistance dominates the discussion, there may be nothing these recommendations or others could do to bring a wind farm into production.

Still, transitioning from fossil fuels to renewable energy is a vital contribution to slowing climate change.[342] The proposals herein are aimed at ameliorating this emerging policy crisis. The proposals we have made here can create new models for individuals, groups, and communities to more-openly consider the benefits that will come along with the undeniable burdens they will bear if, or when, a wind farm is constructed in their locations.

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338. Interview 701 with Company Representative, *supra* note 3.

339. *Id.*

340. *Id.*

341. *See e.g., supra* note 15.

342. *See Special Report: Global Warming of 1.5 Degrees Celsius*, *supra* note 333, at ch. 2 (noting the role of fossil fuels in contributing to climate change).

These recommendations may help provide nuance and open possibilities where a binary antipathy to wind farms has emerged as the dominant reaction.