TURNING THE TIDE: SOLVING OFFSHORE WIND'S GRIDLOCK ECONOMY WITH PROPERTY & LIABILITY RULES

Liam F. Heffernan*

Offshore wind is key to combatting climate change. It also offers enormous economic potential for both developed and growing sectors of the economy and implicates national security concerns such as energy independence. But as offshore wind has taken off around the globe, its development in the United States has stagnated. Even carefully selected projects, such as the now-infamous Cape Wind, have failed or faced serious setbacks. Litigation over projects drives up costs and makes it even more difficult to keep projects profitable in an industry that already has high input costs.

Well-funded, local interest groups receive the most attention, much of it negative, as a source of this litigation. That attention may be warranted, but the problem is broader: a system of overlapping property interests in scarce ocean spaces has created gridlock and prevented offshore wind from taking hold. This problem is not new, and a variety of solutions ranging from regulatory reforms to more creative property proposals have been implemented in offshore wind and other contexts with varying degrees of success. Yet, offshore wind remains woefully underdeveloped.

This Note argues that a system of property and liability rules, often referred to as "The Cathedral Model," could help solve the offshore wind's gridlock problem. While property and liability rules may be unconventional, a tailored legal system can satisfy the two main competing interests at play in offshore wind development: incentivizing project development while making sure impacted communities are fairly compensated.

* J.D. Candidate 2026, Columbia Law School; B.A. 2023, Harvard University. I'd like to thank Professor Michael Heller for his mentorship and invaluable guidance throughout the drafting process. Additionally, I'd like to thank the Columbia Business Law Review Editorial Board and Staff for their excellent editorial work.

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INTRODUCTION

When jagged scraps of a wind turbine blade washed up on Nantucket beaches in July 2024, officials quickly closed beaches for safety reasons.[1] Fourteen miles off the coast of Martha's Vineyard and a couple of days before, the blade, over 300 feet in length, had broken off a turbine from the Vineyard Wind project and begun to drift.[2] Beaches were reopened for swimming shortly after the incident, but the damage was already done.[3] Some locals, like

[1] *See* Stanley Reed & Ivan Penn, *Broken Blades, Angry Fishermen and Rising Costs Slow Offshore Wind*, N.Y. TIMES (Sep. 12, 2024), https://www.nytimes.com/2024/09/12/business/energy-environment/offshore-wind-blade-vineyard-wind.html (on file with the Columbia Business Law Review).

[2] *Id.*

[3] *Id.*

fisherman Peter Kaizer, felt their worst fears about offshore wind energy had come true.[4] Vineyard Wind, supposed to be the first large-scale offshore wind project in the United States, now faces its own safety risk: death by a thousand cuts. Local interest groups, often funded by deep-pocketed third parties, are litigating against the project with an eye to delaying its development and draining its resources.[5] If Vineyard Wind and other projects like it aren't able to find a way past this bottleneck, they may suffer the same fate as earlier attempts at offshore wind farms and be forced to abandon development.[6]

This Note argues that these problems could be solved by applying Rule Four of Guido Calabresi and A. Douglas Melamed's "Cathedral Model." Doing so would empower wind energy companies to pay damages to local interests and fend off harmful litigation. This approach correctly assigns the initial entitlements based on efficiency and distribution goals while cutting through the high transaction costs associated with litigation. Part I begins by discussing the enormous potential of offshore wind, how its development has fallen behind in the United States, and some potential explanations for this stagnation. It discusses the litigation, delays, and cancellations facing many offshore wind projects, reframing these bottlenecks as a problem of too much ownership. Part II examines potential solutions, including some which have been attempted, and their drawbacks. Part III argues that Calabresi and Melamed's property and liability rules framework, from their influential 1972 paper, can provide an effective solution to this problem. Finally, this Note discusses potential pitfalls, logistics for implementation, and the applicability of this solution to actors at the state level.

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[4] *Id.*

[5] *See* Allie Reed, *Offshore Wind Projects at Risk Despite Wins in First Circuit*, BLOOMBERG LAW (Sep. 3, 2024), https://www.bloomberglaw.com/product/blaw/bloomberglawnews/bloomberg-law-news/ (on file with the Columbia Business Law Review) (noting that, for opponents of offshore wind, "[d]elay is a victory").

[6] *E.g.*, Wayne Perry, *Three Groups are Suing New Jersey to Block an Offshore Wind Farm*, ASSOCIATED PRESS (May 3, 2024), https://apnews.com/article/offshore-wind-new-jersey-long-beach-island-87a80ce88cd32a8a891db2de1e0260bd [https://perma.cc/KC3Z-8NCX].

I. OFFSHORE WIND AND THE BLUE ANTICOMMONS

A. *History and Potential of Offshore Wind*

Harnessing wind power has long been seen as key to long-term goals of combating climate change and switching to renewable energy sources.[7] Onshore wind farms, easier to construct and connect to existing power grids, were developed first and thought to be more feasible than offshore wind.[8] In 1991, however, Denmark opened Vindeby, the first offshore wind farm.[9] Largely considered a demonstration project and generating around five megawatts per year, Vindeby showed the promise of offshore wind.[10] Since then, the industry has seen new technological developments, including the increasing blade size and ability for floating offshore wind projects.[11] These developments are increasing the energy-generating potential of offshore wind every year, in turn driving down costs and making economies of scale available for many of these projects.[12] In 2016, for example, the

[7] For a timeline of wind energy development in the United States and note that the first utility-scale wind farms in the United States were operational more than forty years ago, *see History of U.S. Wind Energy*, DEP'T OF ENERGY: WIND ENERGY TECHS. OFF., https://www.energy.gov/eere/wind/history-us-wind-energy [https://perma.cc/M9TP-GUB9] (last visited Jan. 6, 2024).

[8] *See* Katherine A. Roek, *Offshore Wind Energy in the United States: A Legal and Policy Patchwork*, 25 NAT. RESOURCES & ENV'T 24, 24 (2011). As late as 2011, whether to pursue offshore wind at all given its increased costs was still considered a threshold question. *Id.*

[9] *See Making Green Energy Affordable*, *1991-2001 The First Offshore Wind Farms*, ØRSTED, https://orsted.com/-/media/www/docs/corp/com/explore/making-green-energy-affordable-june-2019.pdf (on file with the Columbia Business Law Review) (last visited Jan. 5, 2024).

[10] *Id.*; *see also* Michael P. Giordano, *Offshore Windfall: What Approval of the United States' First Offshore Wind Project Means for the Offshore Wind Energy Industry*, 44 U. RICH. L. REV. 1149, 1150 (2010) (noting that energy developers virtually ignored offshore wind as a domestic energy resource for ten years after Vindeby).

[11] *See Wind Turbines: the Bigger, the Better*, DEP'T OF ENERGY: OFF. OF CRITICAL MINERALS AND ENERGY INNOVATION (Aug. 21, 2024), https://www.energy.gov/eere/articles/wind-turbines-bigger-better [https://perma.cc/KBE2-8YC9].

[12] For one major developer's account of this transformation, *see Making Green Energy Affordable*, *2012-2017 Driving Down Costs*, ØRSTED, https://orsted.com/en/what-we-do/insights/white-papers/making-green-

National Renewable Energy Laboratory commissioned an official study, which determined that the technical capacity of offshore wind in the United States was around 2,000 gigawatts (GW).[13] Just six years later, in a replication of the same study, the technical capacity was estimated to be 4,300GW.[14] Even taking into account changes in population and energy consumption during that time, the technical capacity still increased from twice our national energy consumption per year in 2016 to three times that amount in 2022. But even before some of these crucial technological developments, hopes were high that offshore wind could be a game changer.[15] Ten years after Vindeby, Cape Wind was proposed as the first offshore wind farm in the United States, and in 2010 it received the government's approval.[16] At the time, much of the literature on renewable energy heralded Cape Wind as the standard bearer for an inexorable rise of offshore wind.[17]

But despite being viable for over thirty years and early optimism, offshore wind has been on largely diverging paths in the United States and elsewhere.[18] Eight years ago, the first offshore

energy-affordable/2012-to-2017-driving-down-costs (on file with the Columbia Business Law Review) (last visited Jan. 6, 2024).

[13] WALT MUSIAL ET AL., NAT'L RENEW. ENERGY LAB'Y, 2016 OFFSHORE WIND ENERGY RESOURCE ASSESSMENT FOR THE UNITED STATES vii (2016).

[14] ANTHONY LOPEZ ET AL., NAT'L RENEW. ENERGY LAB'Y, OFFSHORE WIND ENERGY TECHNICAL POTENTIAL FOR THE CONTIGUOUS UNITED STATES 16 (2022).

[15] *See* Greg Watson & Fara Courtney, *Nantucket Sound Offshore Wind Stakeholder Process*, 31 B.C. ENV'T AFF. L. REV. 263, 266 (2004) ("[I]n the densely-populated Northeast, siting wind farms offshore is one of the only possibilities for . . . utility-scale renewable energy facilities.").

[16] *See* Press Release, U.S. Dep't of the Interior, Secretary Salazar Announces Approval of Cape Wind Energy Project on Outer Continental Shelf off Massachusetts (Apr. 28, 2010), https://www.doi.gov/node/15077 [https://perma.cc/2P6L-YWRW].

[17] *E.g.*, Kenneth Kimmell & Dawn Stolfi Stalenhoef, *The Cape Wind Offshore Wind Energy Project: A Case Study of the Difficult Transition to Renewable Energy*, 5 GOLDEN GATE U. ENV'T L.J. 197, 199, 225 (2011) (describing Cape Wind as a bellwether whose prospects look favorable).

[18] *See* Erica Schroeder, *Turning Offshore Wind On*, 98 CAL. L. REV. 1631, 1632 (2010). As much as fifteen years ago, authors were already recognizing that the United States was not keeping pace with other countries. *Id.*

wind turbines in the United States became operational.[19] Block Island and its five turbines continue to supply around 17,000 homes with electricity, but its thirty megawatt (MW) capacity is a relatively small foray into offshore wind energy.[20] South Fork Wind, which began producing electricity earlier this year, added around 132MW, but this still pales in comparison to Europe and Asia, where countries have been leaders in offshore wind.[21] European countries, even though they each have a fraction of coastline of the United States,[22] have long been ahead of the curve and, despite some setbacks, continue to add more capacity each year.[23] The

[19] *See* Tatiana Schlossberg, *America's First Offshore Wind Farm Spins to Life*, N.Y. TIMES (Dec. 14, 2016), https://www.nytimes.com/2016/12/14/science/wind-power-block-island.html (on file with the Columbia Business Law Review).

[20] *Block Island Wind Farm*, ØRSTED, https://us.orsted.com/renewable-energy-solutions/offshore-wind/block-island-wind-farm#community [https://perma.cc/A55F-VPC2] (last visited Jan. 7, 2025); *Offshore wind power*, ØRSTED, https://us.orsted.com/renewable-energy-solutions/offshore-wind [https://perma.cc/8Y5R-FX7H] (last visited Feb. 28, 2025).

[21] *Compare South Fork Wind*, ØRSTED, https://southforkwind.com/about-south-fork-wind (noting the project's 132MW could power around 70,000 Long Island homes), *with Wind Energy in Europe, 2023 Statistics and the Outlook for 2024-2030*, WINDEUROPE, https://windeurope.org/intelligence-platform/product/wind-energy-in-europe-2023-statistics-and-the-outlook-for-2024-2030/ [https://perma.cc/JF7A-VKRW] (last visited on May 11, 2026) (detailing the 3.8GW of offshore wind installed in Europe in 2023 alone).

[22] *Compare How Long is the U.S. Shoreline?*, NAT'L OCEANIC AND ATMOSPHERIC ADMIN., https://oceanservice.noaa.gov/facts/shorelength.html (last visited Jan. 8, 2025), *with Europe's Seas and Coasts*, EUROPEAN ENV'T AGENCY, https://www.eea.europa.eu/themes/water/europes-seas-and-coasts/europes-seas-and-coasts (last visited Jan. 8, 2025). It is unclear given the official numbers reported on both sides how the coastline of the United States compares to Europe as a whole, but no individual country's coastline matches the United States.

[23] *Compare* Adnan Memija, *Ørsted Pulls Plug on 2.4 GW Hornsea 4 Offshore Wind Project in UK*, OFFSHOREWIND.BIZ (May 7, 2025), https://www.offshorewind.biz/2025/05/07/orsted-pulls-plug-on-2-4-gw-hornsea-4-offshore-wind-project-in-uk [https://perma.cc/9GHL-8DKH], *with* Jillian Ambrose, *Offshore windfarm contracts to fuel 12m homes in Great Britain after record auction*, THE GUARDIAN, (Jan. 14, 2026), https://www.theguardian.com/environment/2026/jan/14/offshore-windfarm-contracts-to-fuel-homes-great-britain-record-auction [https://perma.cc/7WTH-ZUKN] *and* Kate Abnett, *Europe commits to wind energy*

Netherlands, for example, added 1.9GW of capacity in 2023, bringing Europe's total capacity to 34GW.[24] China, meanwhile, has been aggressive in its approach to offshore wind, leading the world in offshore wind development for six years in a row now.[25] In 2024, China added 6.3GW, finally overtaking Europe,[26] and in 2025 China unveiled new turbines to further bolster its offshore wind capacity and the underlying technology.[27] The harsh realities of climate change make renewable energy a must for all countries, and other countries are recognizing that offshore wind offers a more reliable source than many other types of renewable energy.[28] And beyond climate change, energy production "has been and will continue to be a cornerstone issue in the U.S. economy, national security, and politics."[29] Given its enormous potential and far-reaching impacts, why has offshore wind not picked up speed in the United States?

expansion despite Trump criticism, draft shows, REUTERS (Jan. 26, 2026), https://www.reuters.com/sustainability/climate-energy/europe-commits-wind-energy-expansion-despite-trump-criticism-draft-shows-2026-01-23/ (on file with Columbia Business Law Review).

[24] JOYCE LEE & FENG ZHAO, GLOB. WIND ENERGY COUNCIL, GLOBAL WIND REPORT 2024 141, 149 (2024).

[25] *Id.* at 141.

[26] *Id.*

[27] *Offshore Wind Turbines in 2025: China Continues Leading in Single-Unit Capacity, Vestas's 15 MW Turbine Installed at Offshore Wind Farms*, OFFSHOREWIND.BIZ (Jan. 1, 2026), https://www.offshorewind.biz/2026/01/01/offshore-wind-turbines-in-2025-china-continues-leading-in-single-unit-capacity-vestass-15-mw-turbine-installed-at-offshore-wind-farms/ [https://perma.cc/6WLW-64GS]; Adnan Memija, *Dongfang Installs 'World's Largest Single-Capacity' Offshore Wind Turbine for Testing*, OFFSHOREWIND.BIZ (Sep. 3, 2025), https://www.offshorewind.biz/2025/09/03/dongfang-installs-worlds-largest-single-capacity-offshore-wind-turbine-for-testing [https://perma.cc/TPB3-3SXR].

[28] *See*, *e.g.*, Ed Feo & Josh Ludmir, *Challenges in the Development and Financing of Offshore Wind Energy*, 14 ROGER WILLIAMS U. L. REV. 672, 672 (2009) (noting advantages of offshore wind, including stronger breezes and closer proximity to large population centers).

[29] Nicolas Martino, *Offshore Wind Energy: Sophisticated Technology Struggling with Outdated Legislation*, 58 JURIMETRICS 59, 80 (2017); *see also* Lee & Zhao, *supra* note 24, at 151 ("Europe is accelerating renewables development to achieve energy security in the aftermath of Russia's invasion of Ukraine.").

B. *Development and Incentivization of Offshore Wind Projects*

Possible explanations for the stunted growth of offshore wind in the United States include a complex regulatory process and high costs of development. However, the regulatory process has been clarified over time and strong financial incentives exist for offshore wind developers, so these explanations fall short of articulating the whole problem. Because offshore wind took so long to take hold in the United States, the regulatory framework was unclear at first.[30] In 2005, however, the Energy Policy Act (EPAct) authorized a new leasing process for renewable energy programs in federal waters.[31] Years later, the Department of the Interior announced finalized regulations governing the structure of this leasing process.[32] Those regulations split the process into four main phases: planning, leasing, site assessment, and construction and operations.[33] First, in collaboration with Tribes, states, federal agencies, and other stakeholders, the Bureau of Ocean Energy Management (BOEM) identifies areas best suited for offshore wind development.[34] Then, the agency determines the level of interest in a given area and conducts leasing through auction if necessary.[35] After obtaining the lease, developers must submit a Site Assessment Plan (SAP) and, once their SAP is approved, conduct all relevant studies and surveys.[36] After final approval, they can begin construction.[37] This deceptively simple process can be conveyed in a one-page flowchart, but it dovetails with several other major

[30] *See* Casey O'Brien, *Continuing Controversy over Cape Wind: The Lasting Effects of Legal and Regulatory Hurdles on the Offshore Wind Farm*, 26 GEO. INT'L ENV'T L. REV. 411, 412 (2014) (describing the often-duplicative permitting efforts of seventeen different federal agencies during the Cape Wind saga).

[31] Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (Aug. 8, 2005).

[32] 30 C.F.R. § 585 (2024); *see also* Talia Buford, *Interior Finishing MMS Makeover*, POLITICO (Oct. 11, 2011), https://www.politico.com/story/2011/10/interior-finishing-mms-makeover-065663 (on file with the Columbia Business Law Review).

[33] *Wind Energy Commercial Leasing Process Fact Sheet*, BUREAU OF OCEAN ENERGY MGMT. (May 2021).

[34] *Id.*

[35] *Id.*

[36] *Id.*

[37] *Id.*

regulatory requirements.[38] BOEM is required to issue Environmental Impact Statements (EIS) as part of that process to make sure potential projects comply with a number of statutes, including but not limited to the Outer Continental Shelf Lands Act (OCSLA), the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and the National Historic Preservation Act (NHPA).[39] Additionally, the U.S. Army Corps of Engineers must issue permits to prospective developers when projects would affect any navigable waters, and projects requiring transmission lines that run through state waters have to comply with individual states' policies under the Coastal Zone Management Act (CZMA).[40] While still a time-consuming process,[41] it is already much more manageable than when CWA first sought government approval of Cape Wind.[42]

The Biden Administration went further, promulgating the Renewable Energy Modernization Rule (REMR).[43] Effective July 15, 2024, REMR aims to reduce regulatory burdens and costs by removing duplicative processes, giving developers flexibility in submitting reports, and generally improving the efficiency of the entire process.[44] REMR may face heightened scrutiny in the future,[45] but it shows a shift over the past twenty years away from miles of red tape and towards a straightforward, though rigorous,

[38] *See* Tade Oyewunmi, *The Regulatory State and the Emerging Offshore Wind Energy Market in the United States*, 13 ARIZ. J. ENV'T L. & POL'Y 1, 14 (2022).

[39] *Id.* at 15–20.

[40] James P. Rigano & Alyse Delle Fave, *Offshore Wind: Government Control and the Regulatory Landscape*, 29 ENV'T. CL. J. 80, 82–84 (2017).

[41] Oyewunmi, *supra* note 38, at 5 (estimating around ten years for all four BOEM phases).

[42] *E.g.*, Kimmel & Stalenhoef, *supra* note 17, at 198, 225 (discussing how Cape Wind is helpful for resolving at least some of the regulatory issues facing offshore wind).

[43] 30 C.F.R. § 585.

[44] *Renewable Energy Modernization Rule Fact Sheet*, BUREAU OF OCEAN ENERGY MGMT.

[45] *See* John W. Northington Jr., Samuel R. Boden & Derek B. Kalbfleisch, *Calming the Seas for Offshore Wind*, K&L GATES LLP (May 2, 2024), https://www.klgates.com/Calming-the-Seas-for-Offshore-Wind-Renewable-Energy-Modernization-Rule-Seeks-to-Boost-Regulatory-and-Financial-Certainty-for-Wind-on-the-Outer-Continental-Shelf-5-2-2024 [https://perma.cc/VLQ7-4TVY] (noting that a new administration may result in obstacles but that REMR should be insulated from claw back under the Congressional Review Act).

permitting process. The regulatory framework still needs improvement, and many authors have focused on solutions for this aspect of the problem.[46] Perhaps there is some regulatory silver bullet that would succeed where attempts like the 2009 reorganization have failed, but it may also be time to acknowledge that regulatory burdens cannot entirely explain offshore wind's failure to launch.

Similarly, offshore wind is not an underdeveloped resource simply because of its high costs or a lack of financial incentives. Building facilities offshore, though it is what makes this form of renewable energy so enticing, also comes with supply chain issues and long lead times, so potential investors must be patient and willing to wait for any future returns.[47] Projects also require significant investments of capital at the outset, even more so than many other forms of renewable energy.[48] These issues were exacerbated by the Covid-19 pandemic and the high inflation that followed, and there has been some worry that renewable energy companies may no longer see these projects as viable.[49] However, the strong, continued interest in new sites and the record prices from some recent BOEM leasing auctions both suggest otherwise.[50] Offshore wind developers themselves admit that the world is in a different place than it was a few years ago, but the response to these new and heightened financial challenges has been to demand more

[46] *See* discussion *infra* Part II.A.

[47] *See, e.g.*, Todd D. Amaral, *Offshore Wind Financial Incentive Programs*, 52 J. MAR. L. & COM. 232, 234 (2023).

[48] *Id.* at 235–36.

[49] *E.g.*, Ivan Penn, Stanley Reed & Brad Plumer, *What Ails Offshore Wind: Supply Chains, Ships and Interest Rates*, N.Y. TIMES (Dec. 11, 2023), https://www.nytimes.com/2023/12/11/business/energy-environment/offshore-wind-energy-east-coast.html [https://perma.cc/J6AD-KSHK] (noting that some wind farms may be delayed or never built because offshore wind executives miscalculated the impacts of these events).

[50] *See* Press Release, U.S. Dep't of Interior, Biden-Harris Administration Sets Offshore Energy Records with $4.37 Billion in Winning Bids for Wind Sale (Feb. 25, 2022), https://www.doi.gov/pressreleases/biden-harris-administration-sets-offshore-energy-records-437-billion-winning-bids-wind [https://perma.cc/AA89-DEJF]; *see also* Press Release, U.S. Dep't of Interior, Biden-Harris Administration's Central Atlantic Offshore Wind Lease Sale Yields Nearly $93 Million (Aug. 14, 2024), https://www.doi.gov/pressreleases/biden-harris-administrations-central-atlantic-offshore-wind-lease-sale-yields-nearly [https://perma.cc/6PSB-8KTY]. These recent sales indicate competitive interest across a wide geographical range.

protections and proceed cautiously, not to abandon offshore wind altogether.[51]

The federal government has at times responded to these issues by offering a wide range of financial incentives, including tax benefits, grants, and subsidized debt programs.[52] The most consistent of these incentives have been the various tax benefits available to offshore wind developers, including the Investment Tax Credit (ITC), Production Tax Credit (PTC), and the Modified Accelerated Cost-Recovery System (MACRS).[53] In 2022, the Inflation Reduction Act (IRA) significantly updated both tax credits, extending their expiration dates, updating certain qualifying criteria, and adding bonus credits for domestic production quotas and location in low-income communities.[54] These programs, in addition to providing direct help to developers, often provide stability to an uncertain industry.[55] Democratic and Republican administrations alike have continued the use of MACRS, with the Tax Cuts and Jobs Act of 2017 even adding a bonus depreciation system for qualifying property.[56] The ITC and PTC, though meant

[51] Penn et al., *supra* note 49.

[52] *See* Amaral, *supra* note 47, at 236–45 (noting that states have begun offering some financial incentives as well, though mainly focused on local support and job creation, whereas these federal incentives affect developers directly).

[53] *Id.* at 236–37; *see also Wind Energy Financial Incentives*, WIND ENERGY TECH. OFFICE, https://windexchange.energy.gov/projects/incentives [https://perma.cc/PPH7-TCSK] (last visited Jan. 9, 2025).

[54] *See* Inflation Reduction Act of 2022, Pub. L. No. 117-169; *see also* Corrie E. Clark, Laura B. Comay & Donald J. Marples, *Offshore Wind Provisions in the Inflation Reduction Act*, LIBRARY OF CONGRESS (Oct. 22, 2024), https://www.congress.gov/crs-product/IN11980 (on file with the Columbia Business Law Review) (summarizing of each provision affecting offshore wind in the IRA and their citations).

[55] *See, e.g.*, Wind and Water Power Tech. Office, *Offshore Wind Projects: Fiscal Years 2006-2014*, U.S. DEP'T OF ENERGY (July 2014), https://www.energy.gov/sites/prod/files/2014/09/f18/Offshore%20Wind%20Project%20Report.pdf [https://perma.cc/K4LS-LEUK] (noting funding given to offshore wind projects during the financial crisis through the American Recovery and Reinvestment Act of 2009).

[56] *See* Tax Cuts and Jobs Act of 2017, Pub. L. No. 115-97; *Modified Accelerated Cost-Recovery System*, NC CLEAN ENERGY TECH. CENTER (July 25, 2025), https://programs.dsireusa.org/system/program/detail/676/modified-accelerated-cost-recovery-system-macrs [https://perma.cc/FY6X-LU5V] (describing the evolution of MACRS since its initial adoption in 1986).

to be more durable,[57] were both significantly altered by the One Big Beautiful Bill Act (OBBA) in July 2025. OBBA imposed new limits on the usage of both credits for renewable energy projects, making it unlikely that many offshore wind projects can reap the intended benefits.[58] President Trump had suggested he would repeal much of the IRA, even though it benefits taxpayers and industries in many Republican states,[59] but the action taken so far has been less sweeping. Overall, at least some of these tax benefits will support offshore wind for years to come, and they provide much-needed stability for developers looking to break into an industry that is still in its infancy in the United States.

In addition to benefits that affect the tax liability of developers, the federal government has subsidized a significant amount of debt and provided grants for infrastructure development and future research. In 2005, the EPAct created a loan guarantee program within the Department of Energy (DOE).[60] Subject to certain requirements, for example a ceiling on the percentage of a project that can be funded by this program, the loan program office of DOE guarantees loans used to directly or indirectly support the development of offshore wind projects.[61] As of September 2024,

[57] For a discussion of these new, "clean electricity" versions of the ITC and PTC, *see* Clark et al., *supra* note 54.

[58] Anna Adamsson, *What Nonprofits Need to Know about the Investment Tax Credit in 2025*, CLEAN ENERGY GROUP (Sep. 3, 2025), https://www.cleanegroup.org/what-nonprofits-need-to-know-about-itc-2025 [https://perma.cc/3CYJ-D9KJ]; *The 45Y Clean Energy Production Credit After the Big Beautiful Bill*, BASIS CLIMATE (July 17, 2025), https://www.buildwithbasis.com/insights/45y-clean-energy-production-credit-after-big-beautiful-bill [https://perma.cc/9CYN-49UX].

[59] *See* Atin Jain & Meredith Annex, *Strong US Clean Energy Growth to Continue Despite Election Headwinds*, BLOOMBERG NEW ENERGY FINANCE (Oct. 31, 2024), https://about.bnef.com/blog/strong-us-clean-energy-growth-to-continue-despite-election-headwinds/ [https://perma.cc/424C-PGAG].

[60] 42 U.S.C. § 16515–16517; *see also* Loan Programs Office, *Title 17 Clean Energy Financing*, U.S. DEP'T OF ENERGY, https://www.energy.gov/edf/articles/t17-downloadable-handout-overview [https://perma.cc/2M3G-ENKT] (last visited Jan. 8, 2025).

[61] *See* Amaral, *supra* note 47, at 244 ("[M]ust utilize innovative technology, deliver greenhouse gas benefits, be located in the United States, . . . present a reasonable prospect of repayment."); *see also* Loan Programs Office, *Inflation Reduction Act of 2022*, U.S. DEP'T OF ENERGY (Sep. 22, 2023), https://www.energy.gov/lpo/inflation-reduction-act-2022

DOI, DOE, and the Department of Transportation (DOT) had collectively awarded several billion dollars to projects that will support the development of offshore wind.[62] This includes around $3 billion for investments in the transmission grid, more than $675 million for updating port infrastructure on both coasts, and more than $950 million towards developing cost-effective floating offshore wind technology.[63] Loan guarantees and grants are likely less available during administrations more hostile to offshore wind, but that does not diminish their impact. These investments will continue to pay dividends in the future and, eventually, help the offshore wind industry scale up effectively.[64]

Opponents have criticized many of these incentives, claiming that they are propping up an industry that will never be profitable on its own.[65] Setting aside whether that statement is true,[66] it is telling that opponents of offshore wind do, in fact, believe that these programs are successfully incentivizing projects. There have also been growing calls to make these incentives more responsive to a broader set of needs that would include local,

[https://perma.cc/8BHK-9EU8] (noting that the IRA appropriated over $11 billion for the existing loan programs and $5 billion for the Energy Investment Reduction program (EIR), which provides additional loan guarantees for projects that repurpose old energy infrastructure).

[62] Gerhard Peters & John T. Woolley, *Biden-Harris Administration Hits Offshore Wind Milestone, Continues to Advance Clean Energy Opportunities*, THE AMERICAN PRESIDENCY PROJECT (Sep. 5, 2024), https://www.presidency.ucsb.edu/documents/fact-sheet-biden-harris-administration-hits-offshore-wind-milestone-continues-advance [https://perma.cc/9SRK-MX7M].

[63] *Id.*; *see also, e.g.*, *Biden-Harris Administration Invests $2.2 Billion in the Nation's Grid*, U.S. DEP'T OF ENERGY (Aug. 6, 2024), https://www.energy.gov/articles/biden-harris-administration-invests-22-billion-nations-grid-protect-against-extreme [https://perma.cc/8WQ3-Q675].

[64] *See* Penn et al., *supra* note 49 (discussing offshore wind's chicken and egg problem between robust supply chains and reliable demand).

[65] *See* Jonathan A. Lesser, *The False Economic Promises of Offshore Wind*, 47 REGULATION 32, 38 (2024).

[66] *See, e.g.*, Isaac Slevin et al., *Against the Wind: A Map of the Anti-Offshore Wind Network in the Eastern United States*, BROWN UNIV. CLIMATE & DEV. LAB (Dec. 2023). This initial research outlines that a network of offshore wind opponents subvert the message of wind energy and "[turn] green to black and clean to dirty[.]" *Id.* at 6.

community interests.[67] For now, however, these incentives are at least helping to feed an appetite for offshore wind that is still growing.[68] Offshore wind in the United States lags far behind other nations like China and the United Kingdom.[69] This disparity has worsened in recent years,[70] despite the regulatory process getting a serious facelift, developers showing strong and continued interest even in the face of a global pandemic, and the federal government offering a wide range of incentives. The regulatory process and high costs of development cannot, on their own, explain this phenomenon. A full account of the problem must consider the debilitatingly high transaction costs litigation imposes on offshore wind projects.

C. *Excessive Litigation and Holdouts Problem*

In 2001, Cape Wind Associates, LLC (CWA) proposed the construction of an offshore wind farm in Nantucket Sound.[71] Designated Cape Wind, the project would have had a capacity of around 450MW, enough to cut carbon emissions by an amount equal to taking 175,000 cars off the road.[72] Due in part to confusion

[67] *See, e.g.*, Amaral, *supra* note 47, at 255 ("[P]olicymakers should remain sensitive to shifting needs . . . and various facets of offshore wind development."). Responsiveness to a wide range of needs is what can make creative property proposals, *infra* Part II.B, so effective.

[68] *See* discussion *supra* notes 46–48.

[69] *See supra* notes 21–25.

[70] *See* Jennifer McDermott, *Trump has hindered offshore wind while China and other countries invest heavily*, ASSOCIATED PRESS (May 14, 2026), https://apnews.com/article/offshore-wind-energy-climate-trump-b8be5561c56d8932ef97fcbec9062fe1 [https://perma.cc/G9K6-5Y8C] (discussing the federal government's recent deals redirecting investment away from offshore wind).

[71] *See The Cape Wind offshore wind farm: a first for the USA?* , 6 REFOCUS 34, 34 (2005) ("First proposed in November 2001 . . . the proposed site in Massachusetts state waters between Cape Cod and Nantucket Island at Horseshoe Shoals was chosen taking into account the intensity of sustained winds, the water depths and its accessibility to the transmission grid."). For CWA's updated proposal following the EPAct's reorganization of the permitting process, *see also* Letter from James S. Gordon, President, Cape Wind Assocs., to Walter D. Cruickshank, Deputy Dir., Minerals Mgmt. Serv. (Sep. 15, 2005) (on file with the Bureau of Ocean Energy Mgmt.).

[72] Approval of Cape Wind Energy Project on Outer Continental Shelf off Massachusetts, *supra* note 16.

about which agency was in charge of the regulatory review,[73] CWA finally signed the nation's first commercial offshore renewable energy lease only in late 2010.[74] After some early legal challenges and in the wake of this signing, Cape Wind seemed poised for success and was hailed as a sign of good things to come for offshore wind.[75] But instead of becoming "one of the largest offshore wind farms in the world," and a significant step towards clean energy in the United States, Cape Wind died on the vine by the end of 2017.[76] Local interest groups, funded largely by wealthy Nantucket residents like William I. Koch, spent years bringing countless legal challenges with the express purpose of delaying the project and running up costs for CWA.[77] Any legal victories for CWA or the project proved to be pyrrhic, draining resources and eating away at valuable time.[78] Today, more than twenty years after Cape Wind faced its first legal challenge, endless litigation continues to threaten other offshore wind projects.[79]

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[73] *See* Kimmel & Stalenhoef, *supra* note 17, at 205 ("While this legislation can be deemed a legitimate effort to establish a rational and orderly process for federal permitting of offshore wind facilities, one might also suspect that the legislation was intended to take the permitting authority away from the Corps, which seemed to favor the project.").

[74] *See* Press Release, U.S. Dep't of Interior, Salazar Signs First U.S. Offshore Commercial Wind Energy Lease with Cape Wind Associates, LLC (Oct. 6, 2010), https://www.doi.gov/news/pressreleases/Salazar-Signs-First-US-Offshore-Commercial-Wind-Energy-Lease-with-Cape-Wind-Associates-LLC [https://perma.cc/H9ND-RXYD] (citing Cape Wind as the beginning of a new era and an important milestone in offshore wind development).

[75] *See* Michael P. Giordano, *Offshore Windfall: What Approval of the United States' First Offshore Wind Project Means for the Offshore Wind Energy Industry*, 44 U. RICH. L. REV. 1149, 1168, 1170 (2010) (predicting that the persistence shown by Cape Wind would result in a smoother process moving forward).

[76] *See Cape Wind*, BUREAU OF OCEAN ENERGY MGMT., https://www.boem.gov/renewable-energy/studies/cape-wind [https://perma.cc/LVP9-NHAK] (last visited May 17, 2026).

[77] *See* Katharine Q. Seelye, *After 16 Years, Hopes for Cape Cod Wind Farm Float Away*, N.Y. TIMES (Dec. 19, 2017), https://www.nytimes.com/2017/12/19/us/offshore-cape-wind-farm.html (on file with the Columbia Business Law Review). The president of CWA, Jim Gordon, described Cape Wind's struggles as "repeated sudden death… where the goal posts kept moving." *Id.*

[78] *See id.*

[79] *See* Ten Taxpayer Citizens Grp. v. Cape Wind Assocs., 373 F.3d 183, 185–87 (1st Cir. 2004). In that case, originally filed in 2002, the plaintiffs

1. *A Blue Anticommons*

Significant time has been spent analyzing legal challenges to offshore wind,[80] but a focus on individual cases risks missing the forest for the trees. When opponents of offshore wind successfully kill projects through strategic litigation, they are effectively excluding offshore wind from using scarce ocean space, regardless of what statute their claims fall under or which agency their claims challenge. The success of this gridlock strategy has given opponents of offshore wind an effective, though attenuated, right to exclude. Offshore wind's real problem, then, is deceptively simple: too much ownership.

In the wake of Cape Wind's demise, many people blamed CWA for choosing a particularly contentious site.[81] This criticism centered around the idea that Cape Wind was a warning sign, but that it could easily be avoided in the future.[82] Avoiding litigation, however, is not nearly as easy as recognizing its danger. After rapidly expanding into ocean spaces, especially in the last fifty years, the United States now has jurisdiction over "more human activity in the ocean than any other country."[83] This creates unique

challenged CWA's ability to build a meteorological data collection tower in Nantucket Sound. *Id.*

[80] *See, e.g.*, Dominic Spinelli, *Historic Preservation & Offshore Wind Energy: Lessons Learned from the Cape Wind Saga*, 46 GONZ. L. REV. 741, 763 (2010-2011); *see also* Danielle E. Horgan, *Reconciling the Past with the Future: The Cape Wind Project and the National Historic Preservation Act*, 36 VT. L. REV. 409, 410-11 (2012) (analyzing a case filed in the D.C.C. by the Wampanoag Tribe alleging, among other things, that the DOI and MMS violated the NHPA in issuing a positive Record of Decision for Cape Wind).

[81] *See* Lawrence Susskind & Ryan Cook, *The Cost of Contentiousness: A Status Report on Offshore Wind in the Eastern United States*, 33 VA. ENV'T L. REV. 204, 239 (2015) (explaining that Cape Wind's prime siting in Nantucket Sound "solicited a strong negative reaction" from local opponents concerned about visual, environmental, tourism, and tribal impacts and that supporters characterized opposition as driven by wealthy nearby residents).

[82] *See* Seelye, *supra* note 77 ("Critics insisted that Mr. Gordon was putting his $2.6 billion project in the wrong spot.").

[83] *See* Adele Irwin, *Offshore Wind Energy or Domestic Seafood? How the Department of the Interior Can Facilitate Both through Self-Binding Procedures*, 96 ST. JOHN'S L. REV. 517, 517 (2022); *see also* Jean-Baptiste Jouffray et al., *The Blue Acceleration: The Trajectory of Human Expansion into the Ocean*, 2 ONE EARTH 43, 43 (2020). The authors describe the widespread effects of oceans being the world's new economic frontier. *Id.*

problems for offshore wind, where projects implicate a variety of local interests and potential litigants have their pick of statutes to bring claims under. Tourism industries, a veritable gold mine for many coastal communities,[84] may fear that projects will be an eyesore or worry about beach closures and safety risks that could deter potential visitors.[85] Homeowners, especially those with high-value properties with ocean views, may support offshore wind projects in general–just not in their backyard.[86] Authors have noted that this view, sometimes referred to as NIMBYism (Not In My Back Yard), can result in curious alliances between wealthy homeowners who might otherwise be on opposing sides.[87] Finally, fishing industries have some of the strongest claims for being adversely affected by offshore wind projects.[88] They need renewable energy to alleviate harmful effects of fossil fuels and climate change impacts on ocean ecosystems, but offshore wind turbines necessarily take up limited ocean space.[89] In addition to economic effects, fishing industries face serious safety concerns. As the global temperature rises, offshore wind farms will be vulnerable

[84] Office for Coastal Mgmt., *Tourism and Recreation*, NAT'L OCEANIC & ATMOS. ADMIN., https://coast.noaa.gov/states/fast-facts/tourism-and-recreation.html [https://perma.cc/FW4M-F63E] (last visited Jan. 6, 2025). The latest economic data indicates tourism is a key industry for coastal communities, employing around two and a half million people and generating at least $143 billion in GDP. *Id.*

[85] *See supra* Introduction and discussion of Vineyard Wind's broken turbine blade.

[86] *Compare* Willett Kempton et al., *The Offshore Wind Power Debate: Views From Cape Cod*, 33 COASTAL MGMT. 119, 127 (2005) (noting an early study found homeowners predicted Cape Wind would cause a 10.9% drop in property values on average), *with* Ben Hoen et al., *The Impact of Wind Power Projects on Residential Property Values in the United States: a Multi-Site Hedonic Analysis*, 33 J. REAL EST. RSCH. 1, 73–75 (2009) (describing the lack of any evidence that wind projects cause widespread property value impacts).

[87] *See*, *e.g.*, Kimmel & Stalenhoef, *supra* note 17, at 203 (describing some attempts by influential Cape Cod residents to block Cape Wind).

[88] *See* Andy Su, *Establishing Floating Offshore Wind Development in Oregon: Lessons from East Coast State Policy Tools Promoting Offshore Wind*, 38 UCLA J. ENV'T L. & POL'Y 277, 284–85 (2020). Even when an Oregon project was sited eighteen miles offshore to avoid raising aesthetic concerns, it still impacted the local fishing industry. *Id.*

[89] *See* Irwin, *supra* note 83, at 518 (describing offshore wind development as a Catch-22 for fishermen).

to flooding and increasingly violent, extended storms.[90] Fishing vessels in turn face navigational difficulties, the possibility of unintended contact with wind turbines, and risks to the safety of their crew and equipment.[91] Listing potential opponents does a disservice to the benefits of offshore wind, but it is important to understand the broad scope of individuals and interest groups who have an interest in challenging offshore wind projects.[92]

Despite the emergence of this vast amount of competing uses for ocean space, no corresponding programs for governing these uses were created.[93] For example, the public trust doctrine gained some traction as a way to legitimize the development of large offshore wind projects in federal waters, but it is little help in choosing between competing, valid uses.[94] As a result, the multitude of overlapping and competing interests is now further complicated by the veritable wealth of claims parties can bring and statutes under which they can litigate, especially in federal court. Throughout the Cape Wind saga, opponents brought claims under a wide range of statutes, including the National Historic Preservation Act (NHPA), Outer Continental Shelf Lands Act (OCSLA), and Migratory Bird Treaty Act (MBTA).[95] Many of these claims were brought directly against agencies or administrative bodies, questioning their decision making under the Administrative Procedure Act's (APA) arbitrary and capricious standard.[96] This kitchen sink approach has continued, and the last two years alone have included claims against

[90] *See* Kimberly E. Diamond, *Extreme Weather Impacts on Offshore Wind Turbines: Lessons Learned*, 27 NAT. RESOURCES & ENV'T 37, 37, 40 (2012).

[91] *Id.* at 37; *see also supra* note 1 for an example of dangers offshore wind projects can pose for fishermen.

[92] *But see* Michael B. Gerrard, *Legal Pathways for a Massive Increase in Utility-Scale Renewable Generating Capacity*, 47 ENV'T L. REP. NEWS & ANALYSIS 10591, 10601–02, 10605 (2017) (proposing that agency review should focus less on some challenges to offshore wind, including aesthetic and property value concerns, and more on offshore wind's long-term benefits, such as reduced fossil fuel use).

[93] *See* Irwin, *supra* note 83, at 524–25.

[94] *See* Alexandra B. Klass, *Renewable Energy and the Public Trust Doctrine*, 45 U.C. DAVIS L. REV. 1021, 1024 (2012) (arguing renewable energy may be entirely consistent with the public trust doctrine, but opponents can also use public trust to block, for example, offshore wind projects).

[95] For a history of Cape Wind's early struggles, *see* Kimmel & Stalenhoef, *supra* note 17.

[96] *See* Zachary R. Evans, *Litigation Challenges to Offshore Wind Development in the United States*, 55 TRENDS 11 (2024).

multiple projects, including Vineyard Wind, Ocean Wind, and the Coastal Virginia Offshore Wind project, under the Marine Mammal Protection Act (MMPA), Endangered Species Act (ESA), NEPA, and more.[97] In a world without transaction costs, this widespread ability to challenge offshore wind projects in court would not be concerning. There are, after all, legitimate reasons for some parties to challenge these projects.[98] However, offshore wind developers, already facing tight margins,[99] acutely feel the imposition of litigation-related costs, and this tension allows motivated opponents to delay, delay, delay—using strategic litigation to bring entire projects to a halt.[100] Even when challenges are ultimately unsuccessful in court, and many are,[101] they can force delays long enough that once-promising projects are abandoned due to skyrocketing costs. This strategy is particularly effective against offshore wind because of the wide range of interests, described above, that these projects implicate.

Because the lengthy litigation strategy is so effective, especially for offshore wind's most powerful opponents,[102] it is no longer just a way for parties to have their voices heard and place valuable checks on the administrative process of approving these projects.[103] Instead, the struggle for control over the development of offshore wind takes shape as an "anticommons", defined by

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[97] *Id.*

[98] *See* O'Brien, *supra* note 30, at 412 ("Far from demonstrating a frustrating "not in my backyard" sentiment, these opponents have shown that there are perhaps some areas where offshore wind should not be developed.").

[99] *See* Reed & Penn *supra* note 1 ("GE Vernova's offshore wind business is losing money, and . . . [the deals are] 'all in the red[.]'").

[100] *See* Bruce Mohl, *William Koch: Delay, Delay, Delay*, COMMONWEALTH BEACON (Boston), (Apr. 13, 2013), https://commonwealthbeacon.org/environment/005-interview-with-bill-koch/ [https://perma.cc/4DPT-VDTD]; *see also* Ryan Kusmin, Note, *Sucking the Air out of Wind Energy: Nuisance Litigation and Its Effect on Wind Energy Development*, 88 WASH. U. L. REV. 707, 727 (2011) ("In addition to being a slow process, litigation is expensive.").

[101] *See, e.g.,* Kimmel & Stalenhoef, *supra* note 17, at 211 ("Ultimately, the Alliance lost each suit, . . . and all of the lawsuits dismissed.").

[102] *See* Mohl, *supra* note 99.

[103] *But see*, Jake Hays, Note, *Feeling the Noise: Proposed Standards and Alternatives to Wind Energy Nuisance Litigation*, 28 FORDHAM ENV'T. L. REV. 242, 266 (2017) ("Litigation may also produce its own social utility by promoting better mitigation techniques, siting requirements, and technological developments[.]").

Professor Michael Heller as a property regime in which multiple owners hold effective rights of exclusion in a scarce resource.[104] The scarce resource at issue here, ocean space, is regulated and managed by various federal agencies.[105] Groups who oppose offshore wind, however, now have the added ability to veto projects, or a right of exclusion.[106] These groups may not think of the oceans as their property in the ordinary sense of the word, but the right to exclude has long been considered a, if not the, central "stick" in the possible bundle of property rights.[107] And while this right of exclusion is not formally or legally granted, it is effective.[108] The result of these groups exercising this attenuated property right is a "blue" anticommons,[109] at least as far as offshore wind is concerned.[110] As in Heller's classic example, where multiple owners of a Moscow storefront could block each other from using the store productively, [111] this blue anticommons allows opponents of offshore wind to become stubborn holdouts against any potential offshore wind projects.[112]

Blue acceleration describes the dizzying trajectory of human expansion into the oceans,[113] but no regime accompanied it to

[104] Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 624 (1998).

[105] *See, e.g.*, About Our Agency, NAT'L OCEANIC AND ATMOSPHERIC ADMIN., https://www.noaa.gov/ [https://perma.cc/P5QG-EP9A] (last visited May 11, 2026); *see also* Main Page, BUREAU OF OCEAN ENERGY MGMT., https://www.boem.gov/ [https://perma.cc/R462-CH3G] (last visited May 11, 2026).

[106] Heller, *supra* note 104, at 666.

[107] *See* Thomas Booms, *Adding Sticks to a Bundle: Government-Imposed Modifications to Property*, 8 EUR. PROP. L.J. 23, 31 (2019) (summarizing earlier claims that rights to exclude are essential to understandings of property).

[108] Heller, *supra* note 104, at 669 ("[I]n the kiosk case in which state authority is quite weak, mafia groups hold informal rights of exclusion[.]").

[109] *Cf.* Jouffray et al., *supra* note 82 (describing the "blue acceleration" that took place in ocean spaces).

[110] *Id.* ("Finally, anticommons property may occur at the level of a particular use of a scarce resource, rather than at the level of an entire property regime."). Heller draws a distinction between individual rooms and a whole apartment, whereas here the anticommons may exist for offshore wind but not for offshore oil and gas. *Id.*

[111] *Id.* at 674.

[112] *See* Kusmin, *supra* note 100, at 728 ("[B]y the time the court hears the case, wind development has already been slowed and its costs increased.").

[113] *See* Jouffray et al., *supra* note 83.

govern the competing uses of ocean space.[114] Instead, a blue anticommons has developed, and motivated parties can now exercise their attenuated property rights in ocean spaces to hold up offshore wind projects, even when those projects are largely popular.[115] Offshore wind is thus stuck in what Professor Heller calls "a gridlock economy,"[116] and the practically unlimited energy potential of federal waters remains largely untapped.[117]

2. *State of Play*

Today, this tragedy of the blue anticommons presents several problems. First, the failure of past projects diminished the offshore wind industry's momentum and still makes developers wary.[118] Second, current and future projects are much riskier investments given recent political and jurisprudential shifts.[119] Finally, proponents of offshore wind are sometimes so focused on finding the path of least resistance around the blue anticommons that they forgo the most valuable projects or risk recreating historical inequalities.

Cape Wind was clearly a major blow to the offshore wind industry.[120] After nearly twenty years of battling, which included tens of millions of dollars spent on both sides, the project failed by every measure.[121] Still, as the dust cleared in 2017, some industry professionals were bullish on offshore wind's future, predicting that it would emerge shortly as a major force on the East Coast.[122]

[114] *See* Irwin, *supra* note 83; Diamond, *supra* note 90.

[115] *See, e.g.*, Giordano, *supra* note 10, at 1167. At least before legal battles dragged on, Cape Wind was largely popular both locally and statewide. *Id.*

[116] For another way of describing anticommons problems, *see generally,* MICHAEL HELLER, THE GRIDLOCK ECONOMY: HOW TOO MUCH OWNERSHIP WRECKS MARKETS, STOPS INNOVATION, AND COSTS LIVES (2008).

[117] *Supra* Part I.A.

[118] *But see* Seelye, *supra* note 77. In 2017, even in the wake of Cape Wind's demise, some still believed offshore wind was about to explode on the east coast. *Id.*

[119] *See* Seelye, supra note 77; O'Brien, *supra* note 30, at 432; *infra* notes 135–137.

[120] *See* Susskind & Cook, *supra* note 81, at 255–56.

[121] *See* Seelye, *supra* note 77. Jim Gordon reportedly spent $100 million in support of the Cape Wind project; Alliance to Protect Nantucket Sound, led by William I. Koch, reportedly raised and spent $40 million. *Id.*

[122] *See id.* (quoting Ian Bowles, former Massachusetts state secretary of energy and environmental affairs).

Unfortunately, this turned out not to be the case, and the gridlock that ensnared Cape Wind has also caught other projects.[123] Anti-offshore wind groups that sprang up in response to Cape Wind have also evolved into a wider-reaching network of donors, think tanks, and advocacy groups all intent on creating similar gridlock for future projects.[124] By early 2021, when the Biden administration took office, there were zero approved, commercial-scale offshore wind projects in federal waters.[125] Yet there has been some progress made since then. South Fork Wind, a project in federal waters with a maximum capacity of 132 MW, became fully operational in March 2024.[126] But South Fork Wind only has around one-third of the maximum capacity of Cape Wind, and even all the active offshore wind farms in the United States combined have less than half of Cape Wind's capacity.[127]

During the Biden administration, DOI and BOEM approved 19 GW of offshore wind energy,[128] but even then, there were warning signs that the industry's enthusiasm for offshore wind was waning.[129] Meanwhile, the same sort of litigation that troubled

[123] *See* Oyewunmi, *supra* note 38, at 2.

[124] *See* Slevin et al., *supra* note 66.

[125] *See* Press Release, U.S. Dep't of Interior, Biden-Harris Administration Approves Eleventh Offshore Wind Project in U.S. History (Dec. 20, 2024), https://www.doi.gov/pressreleases/biden-harris-administration-approves-eleventh-offshore-wind-project-us-history [https://perma.cc/5HES-NJSN].

[126] *Governor Hochul Announces Completion of South Fork Wind, First Utility-Scale Offshore Wind Farm in the United States*, NEW YORK STATE GOVERNOR'S OFFICE (Mar. 14, 2024), https://www.governor.ny.gov/news/governor-hochul-announces-completion-south-fork-wind-first-utility-scale-offshore-wind-farm [https://perma.cc/5F93-NERS].

[127] *Compare supra* note 56, *with supra* Part I.A. Cape Wind's 450MW capacity would have been a leap forward, while current offshore wind projects have only taken small steps so far. *See also* OFFSHORE WIND POWERHUB, https://offshorewindpowerhub.org/ [https://perma.cc/9KBG-F7E7] (last visited March 1, 2026).

[128] U.S. Dep't of Interior, Biden-Harris Administration Approves Eleventh Offshore Wind Project in U.S. History, *supra* note 125.

[129] *See*, *e.g.*, Press Release, Bureau of Oceean Energy Mgmt., BOEM Postpones Oregon Offshore Wind Energy Auction (Sep. 27, 2024), https://www.boem.gov/newsroom/press-releases/boem-postpones-oregon-offshore-wind-energy-auction [https://perma.cc/4JU4-X85T].

Cape Wind has continued.[130] Ørsted, an offshore wind developer responsible for several major projects, cancelled Ocean Wind, a series of projects in New Jersey that would have provided over 2GW of power, following intense opposition from the local county and tourism and fishing industries.[131] Vineyard Wind, in some ways the successor to Cape Wind, has faced similar opponents in court and, though it has succeeded thus far, suffered serious delays and pushback.[132] Developers still willing to pursue offshore wind projects must now spend valuable time and resources paying close attention to shifts in public opinion and dealing with motivated, coordinated opponents—even for projects where there are no adverse environmental impacts.[133]

Using litigation to create gridlock is already a viable strategy for opponents of offshore wind, even when the actual court decisions are unfavorable. However, this is asymmetric, as each case is must-win for offshore wind proponents. This puts projects at a disadvantage, especially as political and legal winds change. Despite ultimately failing, Cape Wind prevailed in all of the legal challenges to its permitting process, and that trend has largely continued.[134] Just this year, for example, Vineyard Wind racked up a series of impressive wins on appeal, including challenges under the APA, NEPA, the MMPA, and more that the First Circuit described as "misguided" and "miss[ing] the point."[135] This strong language makes it seem as though Vineyard Wind and other projects are in the clear, but if opponents start to claim victories of their own it will be almost meaningless. Signs from the first Trump

[130] *See* Brit T. Brown & Benjamin A. Escobar, *Wind Power: Generating Electricity and Lawsuits*, 28 ENERGY L.J. 489, 511 (2007). Some authors predicted this increase in litigation early on in Cape Wind's legal battles. *Id.*

[131] *See* Press Release, Cape May County, NJ, New Jersey Board of Public Utilities Formally Terminates Ørsted Offshore Wind Projects (Aug. 14, 2024), https://capemaycountynj.gov/civicalerts.aspx?aid=1499 [https://perma.cc/B3W6-ZX34].

[132] *See* Eunki Seonwoo, *A Shifting Wind*, MARTHA'S VINEYARD TIMES (Dec. 19, 2024), https://www.mvtimes.com/2024/12/19/a-shifting-wind/ [https://perma.cc/MH6J-N2K6].

[133] *See* Seelye, *supra* note 77.

[134] *See* O'Brien, *supra* note 30, at 432 ("The courts have rarely decided in favor of the Alliance, suggesting that many of their claims are fruitless.").

[135] Seafreeze Shoreside v. U.S. Dep't of the Interior, 123 F.4th 1, 20, 22, (1st Cir. 2024).

administration indicated some openness to offshore wind,[136] but in his second term the President has paused most offshore wind leases,[137] giving firms like Ørsted reasons to pull out of the market entirely[138] and initiating litigation that is ongoing.[139] In addition, the billion dollar deals from the federal government redirecting investment away from offshore wind make the high costs of offshore wind projects even less enticing.[140]

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[136] *See* Press Release, U.S. Dep't of Interior, Trump Administration Delivers Historic Progress on Offshore Wind, (Oct. 18, 2018), https://www.doi.gov/pressreleases/trump-administration-delivers-historic-progress-offshore-wind [https://perma.cc/W238-4Z3D] ("[U.S. Secretary of the Interior Ryan Zinke is] very bullish on offshore wind, and harnessing this renewable resource is a big part of the Trump Administration's made in America energy strategy[.]").

[137] *See, e.g.*, Press Release, U.S. DEP'T OF INTERIOR, The Trump Administration Protects U.S. National Security by Pausing Offshore Wind Lease (Dec. 25, 2025), https://www.doi.gov/pressreleases/trump-administration-protects-us-national-security-pausing-offshore-wind-leases [https://perma.cc/6WNR-TX4B]; Temporary Withdrawal of All Areas on the Outer Continental Shelf from Offshore Wind Leasing and Review of the Federal Government's Leasing and Permitting Practices for Wind Projects, 2025, DCPD202500144 (Jan. 20, 2025); Maxine Joselow & Lisa Friedman, *Trump Halts 5 Wind Farms Off the East Coast,* N.Y. TIMES (Dec. 29, 2025), https://www.nytimes.com/2025/12/22/climate/trump-offshore-windfarms.html (on file with the Columbia Business Law Review).

[138] *Ørsted considers the situation after US developer sues the Trump administration,* ENERGYWATCH (Dec. 30, 2025), https://energywatch.com/EnergyNews/wind/article18880926.ece [https://perma.cc/6A67-3U89].

[139] Mark Segal, *Dominion Energy Sues Trump Administration for Halting Offshore Wind Project After $9 Billion Investment*, ESGTODAY (Dec. 30, 2025), www.esgtoday.com/dominion-energy-sues-trump-administration-for-halting-offshore-wind-project-after-9-billion-investment/ [https://perma.cc/J5ZD-TYQM]; *Dominion Sues Over Offshore Wind Halt*, CONSTRUCTION OWNERS (Dec. 30, 2025), https://www.constructionowners.com/news/dominion-sues-over-offshore-wind-halt [https://perma.cc/MZ5J-RC3W]; Maxine Joselow & Lisa Friedman*, Judge Strikes Down Trump's Latest Effort to Stop Offshore Wind Project*, N.Y. TIMES (Jan. 12, 2026), https://www.nytimes.com/2026/01/12/climate/judge-strikes-down-trumps-latest-effort-to-stop-offshore-wind.html (on file with the Columbia Business Law Review).

[140] *See*, *e.g.*, Press Release, U.S. Dep't of Interior, Interior and TotalEnergies Agree to End Offshore Wind Projects, Lowering Costs for American Families (Mar. 23, 2026), https://www.doi.gov/pressreleases/interior-and-totalenergies-agree-end-offshore-wind-projects-lowering-costs-american [https://perma.cc/3PAJ-Y55N]; *see also* McDermott, *supra* note 70.

During his first term, Trump named more justices to the Supreme Court than any President since Reagan.[141] If this continues, offshore wind projects may face less hospitable courts in the future.[142] Additionally, the effects of those appointments are already being felt. The three Supreme Court Justices appointed by President Trump have supported decisions limiting agency discretion and indicated a willingness to cut back the administrative state at large.[143] Most actions brought against offshore wind projects concern agency administration of federal statutes,[144] so a decision from a court hostile to the administrative state could devastate the prospects of offshore wind. Opponents of offshore wind will not hesitate at this opportunity, and some have already petitioned the Court to hear their cases.[145] Overall, the depressive effects of this gridlock on offshore wind development will likely become even more potent in the next few years. Putting out the potential flames of litigation before they arise will be even more important in the face of changing judicial doctrines and political uncertainty.

Lastly, in the scramble to respond to this gridlock and avoid conflict, offshore wind developers and proponents risk leaving some of their best options on the table. Since Cape Wind, the playbook for developers has largely been to operate within the system, fighting challenges when necessary but working to avoid

[141] *See Judgeship Appointments by President*, UNITED STATES COURTS, https://www.uscourts.gov/about-federal-courts/about-federal-judges/authorized-judgeships/judgeship-appointments-president [https://perma.cc/7W9V-ZZZM] (last visited Feb. 15, 2025). The three justices eclipsed in President Trump's first term outstripped Presidents Clinton, Bush, and Obama, all of whom served consecutive terms of office.

[142] *See* Tiana Headley et al., *Second Trump Term Opens Door to Even More Conservative Judges*, BLOOMBERG LAW (Nov. 6, 2024), https://news.bloomberglaw.com/us-law-week/second-trump-term-opens-door-to-even-more-conservative-judges [https://perma.cc/J8KU-FPAN].

[143] *See generally*, Loper Bright Enters. v. Raimondo, 603 U.S. 639 (2024) (holding that courts should not defer to agency interpretations of statutes).

[144] *Supra* Part I.C and examples of federal statutes providing causes of action for offshore wind opponents.

[145] *See*, *e.g.*, Petition for Writ of Certiorari at i, Nantucket Residents Against Turbines v. Bureau of Ocean Energy Mgmt., 145 S. Ct. 1050 (2025) (No. 24-337).

the most damaging litigation and delays.[146] This has two negative, potentially major implications for the future of offshore wind. First, developers are incentivized to avoid sites that generate the most public controversy, even if those are the locations best suited for offshore wind.[147] Some proponents of offshore wind, reflecting on the Cape Wind saga, have criticized CWA's decision to site Cape Wind so close to Nantucket and Martha's Vineyard.[148] In their view, the developers should have known better than to stir up opposition among many of the wealthy homeowners in those communities, and Cape Wind paid the price for that oversight.[149] In this case, however, hindsight clearly is not 20/20. CWA chose Cape Wind's location because they did not have the technology to go farther into the ocean, not because they overlooked the potential opposition.[150] It is important that those looking to support offshore wind take the right lessons from Cape Wind's failure. Many areas of the U.S. coastline may be similarly contentious,[151] but they are also the areas best suited to generate offshore wind energy.[152] If developers avoid these areas, they may face less vocal opposition, but they also risk cutting the development offshore wind power off at the knees. Second, by focusing on the path of least resistance, offshore wind runs the risk of recreating the same structural inequalities from

[146] *E.g.*, Stanley Reed & Ivan Penn, *A Giant Wind Farm Is Taking Root Off Massachusetts*, N.Y. TIMES (June 27, 2023), https://www.nytimes.com/2023/06/27/business/energy-environment/marthas-vineyard-wind-farm-massachusetts.html (on file with the Columbia Business Law Review) (noting how developers orchestrated a long campaign for support before starting construction).

[147] *See* O'Brien, *supra* note 30, at 433.

[148] *See* Susskind & Cook, *supra* note 81, at 217.

[149] *See* Seelye, *supra* note 77. If nothing else, CWA president Jim Gordon paid the price, shelling out $100 million of his own money to combat the Alliance to Protect Nantucket Sound's $40 million war chest. *Id.*

[150] *Id.*

[151] *E.g.*, Kate Sellig, *The Future of East Coast Wind Power Could Ride on this Jersey Beach Town*, WASH. POST (Aug. 8, 2023), https://www.washingtonpost.com/climate-environment/2023/08/08/offshore-wind-energy-east-coast/ [https://perma.cc/4XME-SW7X] (describing a popular vacation destination as the epicenter of offshore wind opposition on the east coast).

[152] *See* Reed & Penn, *supra* note 146 ("[T]he East Coast 'in many ways looks like the North Sea, with a shallow seabed, sandy bottom and high wind speeds.'").

previous periods of energy development.[153] The network of groups who oppose offshore wind is well-funded and often concentrated in wealthy and powerful communities.[154] If developers continue to focus on avoiding potential conflicts, communities without that same funding and ability to litigate projects to death will disproportionately bear the costs associated with offshore wind projects.[155] Offshore wind is undeniably important, but clean energy should not be tainted with environmental injustice.[156] Fixing the litigation gridlock that is holding back offshore wind may not, on its own, be sufficient to catalyze the industry in the way that is needed given the urgency of our current climate crisis and the sizable head start that other countries have.[157] It is, however, necessary to address this problem head on, with a solution that is tailored to the needs of offshore wind.[158] Until then, projects will be stuck in the blue anticommons, with developers and local communities alike unable to reap the benefits of offshore wind.

II. POTENTIAL SOLUTIONS

Though the blue anticommons is a new way of conceptualizing one of the main problems offshore wind faces, there is significant literature devoted to incentivizing offshore wind development.[159] As a result, potential solutions to this problem abound, both in theory and in practice. These potential solutions largely fall into two buckets: regulatory reforms and creative property proposals. Regulatory reforms, though they come with significant variations, aim to fix the problem by altering either the existing permitting process or the general administrative scheme in

[153] *See* Martin Lockman, *Fencing the Wind: Property Rights in Renewable Energy*, 125 W. VA. L. REV. 27, 33 (2022).

[154] *Id.* at 30 ("[A] single *well-resourced* party can delay development through litigation[.]") (emphasis added).

[155] *See* Susan Lorde Martin, *Wind Farms and NIMBYs: Generating Conflict, Reducing Litigation*, 20 FORDHAM ENV'T L. REV. 427, 427 (2010).

[156] Lockman, *supra* note 153, at 85–86 (encouraging "fair development," of wind resources for groups that have "historically been excluded from planning and permitting procedures").

[157] *See supra* Part I.A.

[158] *See* K.K. DuVivier, *Preventing Wind Waste*, 71 AM. U. L. REV. 1, 52 (2021) ("Wind energy has never had the luxury of a legal regime created to address its unique attributes.").

[159] *See supra* Part I.B and accompanying sources.

which offshore wind is situated.[160] Creative property proposals, on the other hand, break the mold and offer solutions more tailored to offshore wind's needs.[161] Conceptualizing offshore wind's problem as the blue anticommons helps explain why regulatory reforms may often fall short and why creative property proposals, though they have not yet cracked the code, are the right place to look for a solution.

A. *Regulatory Reforms*

Regulatory reforms, as referred to here, are not simply official updates to statutes or agency regulations. Instead, the term covers any attempts, formal or informal, to solve the problem facing offshore wind through conventional governmental or administrative processes. These reforms come in a variety of shapes and sizes, but, as discussed below, they can generally be classified as either procedural or substantive. While they approach the problem in different ways, neither type will likely be successful in fully fixing offshore wind's gridlock problem. The aim of regulatory reforms is to adapt the existing system to changing needs, so offshore wind, like other forms of renewable energy, would necessarily remain without its own legal system or distinct set of property laws. As a result, many of the fixes these solutions offer are one step removed from the real problem. Put differently, they may treat symptoms instead of the disease.

1. *Procedural*

Cape Wind endured several procedural headaches, and since then the regulatory scheme has not improved as simply as some commentators predicted it would.[162] Many proponents of offshore wind have focused on improving the process by which projects receive federal approval.[163] These reforms vary significantly in appearance, but they all share the idea that increased

[160] *See infra* Part II.A.

[161] *See infra* Part II.B.

[162] *See* Feo & Ludmir, *supra* note 28, at 690.

[163] *E.g.*, Su, *supra* note 88, at 305 ("By identifying potential conflicts early in the process, comprehensive plans can try to minimize the environmental, community, and transmission barriers.").

governmental efficiency can solve offshore wind's problems.[164] "Smart from the Start," an Obama Administration initiative launched in 2010, was one of the first major attempts in practice to streamline the regulatory process for offshore wind.[165] The Biden Administration also pushed offshore wind development through its own set of initiatives that included an accelerated leasing schedule, new areas made available for development, and aggressive national goals.[166] A significant number of procedural reforms have also been proposed by researchers and proponents of offshore wind. These proposals often focus on particular statutes such as NHPA or NEPA, but they share the goal of increasing efficiency through standardization.[167] For example, one idea is to incentivize offshore wind through a new statute that would bring regulatory consistency and predictability.[168] In that proposal, the author modeled their idea off of the Telecommunications Act (TCA) of 1996, which incentivized the rapid expansion of mobile phone service in the United States.[169] Not all of these reforms have been put into practice, but the uptick in new projects announced during the Biden

[164] *Compare* Erica Schroeder, *Turning Offshore Wind On*, 98 CALIF. L. REV. 1631, 1661 (2010), *with* Dominic Spinelli, *Historic Preservation & Offshore Wind Energy: Lessons Learned from the Cape Wind Saga*, 46 GONZ. L. REV. 741, 763 (2010-2011).

[165] Press Release, U.S. Dep't of Interior, Salazar Launches 'Smart from the Start' Initiative to Speed Offshore Wind Energy Development off the Atlantic Coast (Nov. 23, 2010), https://www.doi.gov/news/pressreleases/Salazar-Launches-Smart-from-the-Start-Initiative-to-Speed-Offshore-Wind-Energy-Development-off-the-Atlantic-Coast [https://perma.cc/FEZ7-UNJ5]; *see also* Benjamin Fox, *The Offshore Grid: The Future of America's Offshore Wind Energy Potential*, 42 ECOLOGY L.Q. 651 (2015) (noting some early successes of Smart from the Start).

[166] *Fact Sheet: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs,* THE AMERICAN PRESIDENCY PROJECT (Mar. 29, 2021), https://www.presidency.ucsb.edu/documents/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-create-jobs [https://perma.cc/BX4N-2ZNZ]. *But see* Press Release, U.S. Dep't of Interior, The Trump Administration Protects U.S. National Security by Pausing Offshore Wind Leases (Dec. 22, 2025), https://www.doi.gov/pressreleases/trump-administration-protects-us-national-security-pausing-offshore-wind-leases [https://perma.cc/855X-39B8].

[167] *See*, *e.g.*, Gerrard, *supra* note 92, at 10592.

[168] *See* Danielle Stokes, *Renewable Energy Federalism*, 106 MINN. L. REV. 1757, 1808 (2022).

[169] *Id.*

Administration suggests that they, at least when the national environment is generally favorable, help incentivize developers.[170]

Despite their usefulness, procedural reforms will likely suffer from a Goldilocks problem when it comes to fixing the litigation gridlock holding back offshore wind.[171] On one hand, these reforms may not go far enough. One author recently proposed that the Army Corps of Engineers should issue a nationwide permit to fulfill offshore wind projects' obligations under National Rivers and Harbors Act (NRHA).[172] However, opponents of offshore wind challenge projects under countless statutes, so even that author recognized that eliminating that one procedural requirement would likely not do enough.[173] Additionally, informal measures in particular lack long-term legal certainty, and developers may worry that any positive changes will be undone if offshore wind is politically disfavored in the future.[174] The Biden Administration pushed many projects through the approval and leasing process, much like previous administrations supportive of offshore wind, but that work has been largely undone within a year of the Trump Administration.[175]

On the other hand, some of these reforms could go too far and have harmful impacts on legitimate rights and interests implicated in offshore wind development.[176] Expedited NHPA review, for example, could mean that claims such as the one during the Cape Wind saga are seen in the future as barriers to move

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[170] *See* Press Release, U.S. Dep't of Interior, Biden-Harris Administration Approves Eleventh Offshore Wind Project in U.S. History (Dec. 20, 2024), https://www.doi.gov/pressreleases/biden-harris-administration-approves-eleventh-offshore-wind-project-us-history [https://perma.cc/4ZLZ-BNKE].

[171] *See* ROBERT SOUTHEY, THE THREE BEARS (N.Y. Ltd. Editions Club, 1949).

[172] *See* Robert P. Newell, *Transmission Impossible: The Case for a Nationwide Permit for Offshore Wind Transmission Lines*, 47 ECOLOGY L.Q. 475, 479 (2020).

[173] *Id.* at 493.

[174] *See* Roek, *supra* note 8, at 27 (noting developers' need for "long term legal certainty").

[175] *E.g.*, Maxine Joselow & Lisa Friedman, *Trump Halts 5 Wind Farms Off the East Coast*, N.Y. TIMES (Dec. 29, 2025), https://www.nytimes.com/2025/12/22/climate/trump-offshore-wind-farms.html [https://perma.cc/J4GW-25GJ].

[176] Oyweunmi, *supra* note 38, at 25.

around instead of serious claims that need to be addressed.[177] Other proposed reforms direct federal agencies to take actions such as expediting NEPA reviews, issuing programmatic EISs, or streamlining siting through a TCA-like statute, all in the hope of identifying problems proactively.[178] However, these actions could further alienate local communities by not addressing their concerns about specific projects directly or approving projects that miss key problems entirely.[179] Importantly, none of these procedural reforms, because they are by nature focused only on the regulatory process, introduce ways to compensate local communities for any of the real harms associated with offshore wind projects.

Whatever the future holds for offshore wind, fixing the federal regulatory process will remain an important piece of the puzzle.[180] Though informal reforms may be easier to enact when key government actors support offshore wind, formal reforms could have longer-lasting effects. However, any approach that focuses solely on procedural concerns risks overlooking the battle for ownership currently being waged between developers and opponents of offshore wind over scarce ocean space.

2. *Substantive Reform*

Instead of streamlining the permitting process or changing the timeline to allow agencies to batten down the hatches and insulate projects from costly litigation early on, some regulatory approaches propose more substantive reforms, aimed at addressing the underlying concerns driving many of these legal challenges.[181] The best examples of this are several plans that involve changing

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[177] *See* O'Brien, *supra* note 30, at 432–33 (warning that discounting all local opposition to offshore wind projects risks missing legitimate concerns).

[178] *See* Michael B. Gerard, *Who Decides Where the Renewables Should Go?: A Response to Danielle Stokes' Renewable Energy Federalism*, 106 MINN. L. REV. HEADNOTES 400, 413, 415 (2022); Gerard, *supra* note 92, at 10592.

[179] *See* Ori Sharon, *Fields of Dreams: An Economic Democracy Framework for Addressing NIMBYism*, 49 ENV'T L. REP. NEWS & ANALYSIS 10264, 10264 (2019) (ascribing failure of previous solutions to an inability to address the disempowerment local communities feel).

[180] *See* Schroeder, *supra* note 164, 1642 ("Without federal regulatory revision, offshore wind will not realize its full promise.").

[181] *E.g.*, Robert W. Eberhardt, *Federalism and the Siting of Offshore Wind Energy Facilities*, 14 N.Y.U. ENV'T L.J. 374, 411 (2006) (proposing that any regulatory revisions should focus on solving interstate spillovers).

the fundamental language and purpose of some statutes and one plan that would create contingency funds to compensate groups harmed by offshore wind projects.[182] These approaches are compelling because they recognize that offshore wind requires more than an efficient or streamlined permitting system to truly develop, but they still fail to create a new system tailored to offshore wind's needs.

Because the regulatory process for offshore wind involves so many steps, there are a number of reforms that target fundamental statutory language. One author proposes several changes to CZMA to revitalize the statute and make it a more effective tool for promoting offshore wind.[183] Another author takes a different approach, proposing changes to the Jones Act, a cabotage law, that would allow developers to utilize a greater number of ships and make projects less costly.[184] These reforms are often proposed in tandem with procedural reforms. The proposal for programmatic EISs under NEPA, for example, also includes changes to the underlying NEPA guidelines.[185] Those changes would remove negative aesthetic impacts, often used by wealthy homeowners to challenge projects, from agency consideration.[186] That example in particular shows the promise of substantive reforms and their ability to change the language of statutes central to later litigation, but relying on these substantive reforms alone to incentivize offshore wind may be ill-advised. The hope behind substantive reforms seems to be, in line with much of the scholarship on offshore wind,[187] that early, open-ended, and substantive engagement with local groups will prevent the same

[182] *Compare id.*, *with* Lindsey Hutchinson, *Fissues in the Windustry: Mitigating Fishing Industry Concerns While Promoting Offshore Wind*, 37 J. ENV'T L. & LITIG. 285, 311 (2022) (proposing the creation of a fishermen's contingency fund for harms stemming from offshore wind projects).

[183] *See* Schroeder, *supra* note 164, at 1634 ("With specific revisions, the CZMA could serve as the impetus that offshore wind power needs for success in the United States.").

[184] Martino, *supra* note 29, at 60, 78.

[185] *See* Gerrard, *supra* note 92, at 10602.

[186] *Id.*

[187] For a discussion of early stakeholder engagement and avoiding conflict, *see* Olivia Woolley, *Trouble on the Horizon? Addressing Place-Based Values in Planning for Offshore Wind Energy*, 22 J. ENV'T L. 223 (2010).

type of stubborn opposition from recurring.[188] This view of Cape Wind is probably unfair, given the clear documentation of stakeholder meetings that occurred during that process.[189] Moreover, even projects such as Vineyard Wind, where developers were much more intentional about engaging with communities and avoiding conflict, are now dealing with gridlock and litigation.[190]

Distinct from these examples, one idea is to include concerns of fishermen early on and expand the existing fishermen's contingency fund to include losses suffered due to the presence of offshore wind projects.[191] The first part of this proposal bears strong similarities to other substantive reforms, seeking to address concerns of the fishing industry early on with increased data and by giving the fishing industry seats on task force councils.[192] The second part, a contingency fund, is a big step forward.[193] States have already begun researching this with an eye towards implementing it at the state level, but this proposal would expand that research and create a contingency fund resembling insurance for the fishing industry against offshore wind.[194] This regulatory reform is more promising than most others because it incorporates real compensation, much like many creative property proposals.[195] However, it places the burden of proving losses and applying for compensation on groups already bearing costs.[196] Additionally,

[188] *See* Oyewunmi, *supra* note 38, at 3, 39 (aiming revisions towards preventing costly and avoidable conflicts).

[189] *See* Greg Watson & Fara Courtney, *Nantucket Sound Offshore Wind Stakeholder Process*, 31 B.C. ENV'T AFF. L. REV. 263, 276 (2004) (discussing stakeholder meetings held during the Cape Wind process).

[190] *See* Stanley Reed & Ivan Penn, *A Giant Wind Farm Is Taking Root Off Massachusetts*, N.Y. TIMES (June 27, 2023), https://www.nytimes.com/2023/06/27/business/energy-environment/marthas-vineyard-wind-farm-massachusetts.html [https://perma.cc/7UVY-CKTL].

[191] *See* Hutchinson, *supra* note 182, at 305, 311.

[192] *Id.* at 316.

[193] *Id.* at 311.

[194] *Id.*; *see also* Mary Fitzpatrick & Kristen Miller, *Mitigation Funds for Offshore Wind Projects*, OFFICE OF LEG. RSCH., https://www.cga.ct.gov/2024/rpt/pdf/2024-R-0050.pdf [https://perma.cc/T23T-YRVW] (last visited Jan. 10, 2025).

[195] *Contra* Kusmin, *supra* note 100, at 731 (where a 'Right to Wind' statute would provide developers with absolute immunity without compensating local communities).

[196] *See* Hutchinson, *supra* note 182, at 312.

providing compensation to the fishing industry may reduce some parties' opposition to offshore wind, but that is only one group out of a long list.

Substantive reforms, whether they focus on giving local communities real input or effectively providing forms of insurance to the groups most affected, come closer to engaging with offshore wind's underlying ownership problem.[197] But like procedural reforms, their goal is still to fix the problem by adapting existing structures.[198] If all you have is a hammer, everything looks like a nail, and proponents of offshore wind fall into this trap when they cabin any solutions within the existing regulatory process.

B. *Creative Property Proposals*

In contrast to regulatory reforms, creative property proposals operate somewhat removed from existing legal structures, building systems meant to respond to the underlying problems. Historically, these types of solutions have been especially effective in times of transition, where traditional legal and property regimes fall short.[199] While the blue anticommons may be new vernacular, scholars and proponents of offshore wind have already recognized that a unique regime will be necessary to meet the challenges facing offshore wind and help the industry reach its full potential.[200] So far, at least two examples, Community Benefit Agreements (CBAs) and Classified Unitization, show what creative property proposals have to offer.[201] Neither fully solves offshore wind's gridlock problem, but each shows enough encouraging signs to suggest that any solution to this problem must be similarly creative.

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[197] *See* Irwin, *supra* note 83, at 540.

[198] *See* Megan Hiorth, *Are Traditional Property Rights Receding with Renewable Energy on the Horizon*, 62 RUTGERS L. REV. 527, 527 (2010) ("[T]he development of two renewable energy sources-wind, primarily, and solar- impedes upon and is hindered by traditional property rights.").

[199] *See* Lockman, *supra* note 153, at 63 (detailing how, as oil became more valuable, the traditional *ferae naturae* ownership regime fell apart).

[200] *See*, *e.g.*, Hiorth, *supra* note 198, at 529.

[201] *See infra* Part II.B.1 discussion of these alternatives. Note that while classified unitization has primarily been proposed as a solution for onshore wind development, it is still considered here as a potential solution.

1. *Community Benefit Agreements*

Community Benefit Agreements (CBAs) are contracts resulting from voluntary negotiation between local communities and developers.[202] In exchange for public support or other promises, developers often include provisions bringing jobs or other benefits to local communities, and the overall goal of CBAs is to give local groups an increased say over projects being built in their community.[203] The first major CBA was signed in Los Angeles in 2001 to help facilitate the building of the Staples Center, and since then it has been used in a wide range of projects across the United States.[204] Offshore wind has not escaped the rise of CBAs, and developers in the United States and elsewhere have instead embraced them as ways to try to avoid conflicts further down the road.[205] Though CBAs are private agreements, DOE encourages their use and provides developers with resources for crafting them.[206] Developers have also received best practice guides from private organizations such as the Sabin Center for Climate Change Law (Sabin Center).[207] Many of the autopsies on Cape Wind attribute the project's death to a failure to address local concerns and adequately compensate communities, and subsequent developers have responded by negotiating CBAs early on to make

[202] *See Community Benefit Agreements: Frequently Asked Questions*, DEP'T OF ENERGY, https://www.energy.gov/sites/default/files/2024-12/CBA%20Guidance%20FAQ.pdf [https://perma.cc/B75D-Q7CL] (last visited Mar. 4, 2026).

[203] *Id.* While CBAs are not always strictly necessary and may not solve all problems, they can lead to fewer roadblocks in development and make sure concerns are brought to light early on in the process.

[204] *See* Lee Romney, *Community, Developers Agree on Staples Plan*, L.A. TIMES (May 31, 2001), https://www.latimes.com/archives/la-xpm-2001-may-31-mn-4715-story.html [https://perma.cc/7R25-GC6P].

[205] *See*, *e.g.*, Yusuke Murakami & Hironobu Noma, *On your marks – race for offshore wind*, 2019 INT'L FIN. L. REV. 10, 11 (2019) (discussing Japan's Marine Renewable Energy Act, which organizes "coordination committees" to build consensus between developers and local stakeholders).

[206] *E.g.*, *Community Benefit Agreement (CBA) Toolkit*, U.S. DEP'T OF ENERGY, https://www.energy.gov/justice/community-benefit-agreement-cba-toolkit (on file with the Columbia Business Law Review) (last visited Jan. 17, 2025).

[207] *See* Matthew Eisenson & Romany Webb, *Expert Insights on Best Practices for Community Benefits Agreements*, SABIN CENTER FOR CLIMATE CHANGE LAW (Sep. 2023).

sure projects have strong local support.[208] CBAs may not be ubiquitous, but the Sabin Center's database shows many of the largest projects, including Vineyard Wind, South Fork Wind, and South Coast Wind, have already adopted them.[209]

By addressing opposition to projects head on and providing local communities with some compensation, CBAs have made large strides forward.[210] These agreements, however, often do not do enough to solve the gridlock holding offshore wind back, and they may reinforce existing inequalities. Because so little offshore wind power has actually been built in the United States, it is still somewhat unclear how effective CBAs will be in the long run and as projects age. However, even major projects with CBAs still face gridlock and strategic litigation, and this may stem from an enforceability problem. There is significant debate over whether CBAs can be enforced, and it is possible that guarantees provided by local groups may not be binding on every individual in the larger community they are representing during the negotiation process.[211] And if CBAs like Vineyard Wind's are enforceable, groups opposing offshore wind can still find ways around any provisions restricting their ability to challenge the project. Groups' claims often target projects indirectly, through agency decisions, so even strict enforcement of a strong CBA could miss many claims.[212]

Moreover, a CBA that successfully managed to free offshore wind from gridlock could create other problems. CBAs are a tool, not a solution, and many authors have pointed out how

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[208] *See, e.g.*, Stanley Reed & Ivan Penn, *A Giant Wind Farm Is Taking Root Off Massachusetts*, N.Y. TIMES (June 27, 2023), https://www.nytimes.com/2023/06/27/business/energy-environment/marthas-vineyard-wind-farm-massachusetts.html (on file with Columbia Business Law Review).

[209] *Community Benefit Agreements Database*, SABIN CTR. FOR CLIMATE CHANGE L., https://climate.law.columbia.edu/content/community-benefits-agreements-database [https://perma.cc/2D9D-TAWA] (last visited Mar.4, 2026).

[210] *See* Hannah P. Stephan, *Contracting with Communities: An Analysis of the Enforceability of Community Benefits Agreements*, 40 MINN. J.L. & INEQ. 281, 282 (2022).

[211] *See* Sharon, *supra* note 179, at 10274.

[212] *See supra* Part I.C and discussion of tactics used by opponents of offshore wind.

they are only as good as the negotiating process that creates them.[213] CBAs can be created by inside groups with their own agenda, and the overall record of CBAs as a tool for distributive justice is mixed.[214] For offshore wind, this could see wealthy groups with powerful ties, like those currently able to hold up projects, leveraging their political capital and benefiting the most from CBAs. Alternatively, given the thin margins developers already operate on, the increased negotiating power of wealthy communities may drive developers to place burdens of offshore wind development on disadvantaged communities.[215] By at least attempting to work with local communities directly instead of only through the permitting process, CBAs are on the right track, but they are unlikely to be the perfect solution for incentivizing offshore wind.

2. *Classified Unitization*

Originally, unitization emerged to prevent the wasteful overuse of oil and gas fields, offering an alternative for managing property rights where traditional systems of capture had failed.[216] Classified unitization builds on that system by recognizing and quantifying the diverse property rights that come with wind energy.[217] Like CBAs, it operates outside of the traditional regulatory process and addresses the problem of public opposition and delays directly.[218] Instead of taking a development-centered approach or throwing offshore wind by the wayside, classified unitization begins and ends with a property regime where local communities and developers must work together, sharing costs and benefits alike of wind energy.[219] Guaranteed payments and voting

[213] *See* Steven M. Seigel, *Community Benefits Agreements in a Union City: How the Structure of CBAs May Result in Inefficient, Unfair Land Use Decisions*, 46 URB. LAW. 419, 482 (2014).

[214] *Id.* at 419, 496.

[215] *See, e.g.*, Lockman, *supra* note 153, at 29 (highlighting an instance in O'ahu, Hawaii where a disadvantaged community was "being sacrificed for the benefit of developers").

[216] *Id.* at 63–64.

[217] *Id.* at 70 ("[W]ind unitization has stumbled when confronted with the complex property regimes and diverse communities affected[.]").

[218] *Id.* at 71 ("Many of the conflicts that delay and frustrate wind development are, fundamentally, property rights conflicts.").

[219] *Id.* at 84.

rights could be much more effective than reforms to the current regulatory scheme at responding to opposition centered around economic costs,[220] and it would guarantee the stability that wind energy has largely lacked.[221] This system also gives communities power to oppose projects proportional to how much they will be affected, and in that way it is a significant upgrade on the current system and even CBAs, which both can reflect existing inequalities.[222]

Classified unitization may be an ideal strategy for onshore wind, especially given the increased propensity for conflict between neighbors with their own, respective wind farms.[223] However, it would likely be an incomplete solution to offshore wind's gridlock problem for several reasons. First, this strategy may not be strong enough to overcome the most stubborn holdouts against offshore wind. States implementing unitization for other resources have often required strong majorities to force pooling in the first place, with West Virginia even striking down a law that would have required an 80% majority, due to worries about undemocratic infringements on private property rights.[224] These worries, however, are far from reality for offshore wind, where the most vocal and litigious opponents have consistently fought against projects regardless of wider community support and strong scientific evidence that those projects would cause no significant harm.[225] Admittedly, classified unitization could solve part of this problem. If wealthy homeowners, like the ones who delayed Cape Wind,[226] are defined as a class with less voting power, their influence would be reduced. Any benefits could be undermined,

[220] *See supra* notes 183–189.

[221] Lockman, *supra* note 153, at 80.

[222] *Id.* at 62.

[223] *See* Troy Rule, *A Downwind View of the Cathedral: Using Rule Four to Allocate Wind Rights*, 46 SAN DIEGO L. REV. 207, 223 (2009) (advocating for bright-line rules to solve wind turbine wake interference).

[224] *See* Lockman, *supra* note 153, at 66.

[225] *E.g.*, Seelye, *supra* note 77.

[226] *See* Adam M. Dinnell & Adam J. Russ, *The Legal Hurdles to Developing Wind Power as an Alternative Energy Source in the United States: Creative and Comparative Solutions*, 27 NW. J. INT'L L. & BUS. 535, 548 (2007) ("[R]esidents were more likely to be opposed to the project as their income level increased.").

however, by the added burden of requiring a vote every time offshore wind projects are changed or amended.[227]

Second, while defining classes could help level the playing field, there are significant difficulties involved in defining classes for offshore wind. Acknowledging offshore wind's problem as an anticommons aligns with the idea that many wind energy conflicts are essentially property rights conflicts,[228] but there are still important differences between onshore and offshore wind. Onshore wind implicates real property interests, and different conflicts such as intrusive nuisances, non-intrusive nuisances, and windstream effects, can be expressed in terms of how they affect specific plots of land.[229] In contrast, the blue anticommons is a result of groups exercising effective rights of exclusion. These attenuated property rights make defining classes impractical in the same way that the competing priorities of different owners made garden-variety unitization unsuitable for onshore wind.[230]

Finally, the pooled ownership of classified unitization may create distributional effects among owners and make it difficult over time for outsiders to break in. Ocean spaces are meant to be open for use by the public, and this barrier to entry would be particularly undesirable.[231] Classified unitization succeeds in making wind energy development a more participatory process, and an important part of that success comes from providing participants with pro rata compensation.[232] For wind farms that could remain active for decades, this strategy has the potential to create lock-in effects over time for groups whose property rights, formal or informal, entitle them to continued payments.[233] This preference

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[227] *See* Lockman, *supra* note 153, at 79.

[228] *Id.* at 71.

[229] *Id.* at 76–79 (modeling classified unitization).

[230] *Id.* at 70–71.

[231] *See* Joseph L. Sax, *Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 474 (1970) ("[Any] comprehensive legal approach to resource management problems . . . must contain some concept of a legal right in the general public.").

[232] *See* Lockman, *supra* note 153, at 79.

[233] *See* Mark Bolinger & Ryan Wiser, *Benchmarking Anticipated Wind Project Lifetimes: Results from a Survey of U.S. Wind Industry Professionals*, LAWRENCE BERKELEY NAT'L LAB'Y: ENERGY MARKETS & POLICY (2019), https://emp.lbl.gov/publications/benchmarking-anticipated-wind-project [https://perma.cc/5WGA-QR7M] (estimating the average lifespan of modern wind turbines to be thirty years).

for first-in-time users may not be a problem for onshore wind, where private property rights are at issue.[234] But for offshore wind, where the conflict is over access to a communal resource, this raises serious concerns. Ocean spaces are already teeming with resource conflicts. The lobster industry in Maine is a perfect example of how even efficient solutions to these conflicts may create other problems.[235] The system there, enforced by so-called "lobster gangs," respects traditional norms such as first-in-time and allows the lobster industry in Maine to efficiently manage its communal resources.[236] However, those same norms disadvantage newcomers and make communal resources more exclusive.[237] Giving continued payments to local fishing or tourism industries, for example, that operate in the shadow of offshore wind projects, could exclude outsiders from enjoying equal access to ocean spaces. Though classified unitization scores some points as a stable solution to offshore wind's problem, it loses points for making an important public resource potentially inaccessible in the long term.

III. USING THE CATHEDRAL MODEL TO FIX GRIDLOCK

At its core, the litigation gridlock keeping offshore wind stuck in the blue anticommons is based on disagreements over the use of a scarce resource: ocean spaces.[238] Creative property proposals have not solved this problem yet, but these solutions are likely the right tools for the job. The Cathedral Model (the Model), debuted in 1972 by Guido Calabresi and A. Douglas Melamed, offers a law and economics approach to solving such resource conflicts.[239] In the Model, whoever is deciding the outcome of the conflict must choose (a) which party is initially entitled to the scarce resource and (b) whether that entitlement will be protected by a

[234] Lockman, *supra* note 153, at 70.

[235] *See* JAMES M. ACHESON, THE LOBSTER GANGS OF MAINE (1988).

[236] *Id.* at 48.

[237] *Id.* at 24.

[238] *See supra* Part I.C and discussion of the various groups jostling for ocean space.

[239] Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1089 (1972). The Model blends traditional disciplines like property and torts in order to better respond to real conflicts over scarce resources. *Id.*

property rule or a liability rule.[240] Property rules protect entitlements such that other parties can acquire an entitlement only through a voluntary transaction with its holder.[241] Liability rules, on the other hand, give parties the right to acquire an entitlement if they pay the holder an objectively determined value.[242] The most common example of the Model in action, given originally by Calabresi and Melamed themselves, describes the conflict between polluters and nearby landowners.[243] The two steps above, assigning and then protecting initial entitlements, generate four potential rules for how, if at all, polluters should be responsible to nearby landowners who are victims of downstream pollution.[244] Figure A shows this two-by-two set of possible rules.

Figure A

	Property Rule	Liability Rule
Entitlement to Landowner, *L*	**Rule One:** *L*'s initial entitlement to be free from pollution is protected by a property rule, and *P* may not pollute unless *L* allows it.	**Rule Two:** *L*'s initial entitlement to be free from pollution is protected by a liability rule, and *P* must pay *L* damages for any harm caused.
Entitlement to Polluter, *P*	**Rule Three:** *P*'s initial entitlement to pollute is protected by a property rule, and *P* may pollute at will unless she voluntarily agrees with *L* to stop.	**Rule Four:** *P*'s initial entitlement to pollute is protected by a liability rule, and *L* can force *P* to stop polluting by paying an objectively determined value.

[240] *Id.* at 1090–92. The authors also discuss inalienability rules, which apply in limited scenarios when society deems parties should not be able to transfer initial entitlements. *Id.* As most examples of inalienable entitlements involve bodily autonomy, they are not discussed here.

[241] *Id.* at 1092.

[242] *Id.*

[243] *Id.* at 1115–16.

[244] *Id.* at 1115–18.

These rules map the Model onto the problem of pollution and related nuisance claims, but they can also be generalized to describe conflicts over any scarce resource.[245] To do so requires only two steps. First, the polluter in this example can be recharacterized as the "limiting party," or the party whose use infringes on another party's use of the same scarce resource.[246] Next, and more simply, the nearby landowner becomes the "limited party," whose use of the resource is cut short by the limiting party. The set of possible rules can then be reiterated in general terms:

Figure B

	Property Rule	Liability Rule
Entitlement to Limited Party, *LP*	**Rule One:** *LP*'s initial entitlement to be free from limitation is protected by a property rule, and *N* may not limit *LP*'s use of the resource unless *LP* allows it.	**Rule Two:** *LP*'s initial entitlement to be free from limitation is protected by a liability rule, and *N* must pay *LP* damages for any limits *N* imposes on *LP*'s use of the resource.
Entitlement to Limiting Party, *N*	**Rule Three:** *N*'s initial entitlement to limit is protected by a property rule, and *N* may limit *LP*'s use of the scarce resource at will unless she voluntarily agrees with *LP* to stop.	**Rule Four:** *N*'s initial entitlement to limit is protected by a liability rule, and *LP* can force *N* to stop limiting *LP*'s use of the resource by paying an objectively determined value.

Once the Model is expressed in generalized, less pejorative terms, it clearly encompasses offshore wind's gridlock problem.

[245] *See, e.g.*, Rule, *supra* note 223, at 215–16.

[246] *See id.* for an acknowledgment of reciprocal causality. As discussed in the paragraphs below, here opposition groups are described as the limiting party, even though there may be some reciprocal causality, because they are currently preventing almost any offshore wind expansion. In contrast, offshore wind development might limit *how* they could use ocean space, but not *whether* they could use it at all.

Opponents of offshore wind who use litigation to kill projects are the limiting party, and developers who seek to build these projects are the limited party. It may seem unfair to describe opponents of offshore wind as the limiting party, given that both groups have in mind valid uses of federally-owned ocean spaces and offshore wind may, in the future, limit alternative uses.[247] However, much like the polluter who stops a nearby landowner from full enjoyment of their land or a noisy neighbor who deprives their quiet-loving neighbor of silence,[248] it is opponents of offshore wind who have taken the active role. Their strategies created the blue anticommons, and this makes them the limiting party. With these designations in mind, the set of possible solutions offered by the Model is reflected in Figure C.

Figure C

	Property Rule	Liability Rule
Entitlement to Offshore Wind, *W*	**Rule One:** *W*'s initial entitlement to develop offshore wind is protected by a property rule, and *O* may not limit that ability unless *W* allows it.	**Rule Two:** *W*'s initial entitlement to develop offshore wind is protected by a liability rule, and *O* must pay *W* damages for any harm caused by delays or cancellations.
Entitlement to Opponents of Offshore Wind, *O*	**Rule Three:** *O*'s initial entitlement to limit offshore wind developments is protected by a property rule, and *O* may limit at will unless they voluntarily agree with *W* to stop.	**Rule Four:** *O*'s initial entitlement to limit offshore wind developments is protected by a liability rule, and *W* can force *O* to stop by paying an objectively determined value.

[247] *See supra* Part I.C for discussion of the impacts that offshore wind could have on groups such as fishermen.

[248] *See* Calabresi & Melamed, *supra* note 239, at 1090.

Any of the above rules would, in theory, result in an efficient allocation of ocean space between offshore wind and its opponents.[249] However, this does not account for distributional and efficiency concerns, and using the four rules interchangeably would fail to reflect the intricacies of the attenuated property rights at play in this conflict. In contrast, answering the Model's two questions of (a) which party receives the initial entitlement and (b) how that entitlement is to be protected leads to the conclusion that Rule Four is best suited for resolving this conflict. Though it has been used sparingly in practice,[250] Rule Four has shown theoretical promise that it can help solve other renewable energy conflicts, including windstream rights.[251] Here, it can strike a balance that so far has not been offered, incentivizing offshore wind while making sure that groups who have reason to oppose it are fairly compensated.

A. *Choosing Initial Entitlements*

The first order of business for any legal system is to decide, absent all else, which party wins any given resource conflict.[252] The Model defines this as a choice of initial entitlements. Here, that choice is between initially favoring the right of developers to build offshore wind projects or the right of opponents to limit those projects in the ways described above.[253] As part of developing the Model, Calabresi and Melamed also helpfully divide considerations for this question into three groups: economic efficiency, distributional goals, and other justice considerations.[254] Based on all of those considerations, opponents of offshore wind should receive the initial entitlement in this case.

In a world of significant transaction costs, economic efficiency is about building the path between a starting point and some optimal end point, though it may be unknown, with as little friction as possible.[255] In this case, administrative costs and collective action problems indicate that giving opponents of offshore wind the initial entitlement is the most economically

[249] *See* Rule, *supra* note 223, at 218.
[250] *Id.* at 245.
[251] *Id.*
[252] Calabresi & Melamed, *supra* note 239, at 1090.
[253] *See supra* Figure C.
[254] Calabresi & Melamed, *supra* note 239, at 1093.
[255] *Id.* at 1096–97.

efficient option. Though not always controlling, administrative efficiency and the costs of enforcement often factor into this first question.[256] Here, giving opponents of offshore wind the initial entitlement would require little to no cost to enforce, as these groups already possess and exercise this entitlement. Additionally, accurately reflecting the current state of affairs serves the complementary goal of creating a regime specifically tailored to offshore wind.[257] Since there is disagreement over the optimal balance between offshore wind and local interests, economic efficiency also directs those deciding this question to consider which party is the cheapest cost avoider (CCA).[258] Generally, CCA is a law and economics term referring to the party best able to minimize social costs and maximize social benefits.[259] In the Model, the CCA is the party with the greatest ability to switch initial entitlements to more optimal arrangements.[260] Offshore wind developers already raise comparatively large amounts of capital,[261] and as individual entities it is much easier for them to make decisions or change entitlements than an amalgamation of local groups that may have varying interests.[262] Because developers are the CCA, they should bear the costs of changing initial entitlements, and opponents should be initially entitled to limit offshore wind projects. This arrangement is economically efficient, but that does not take into account existing distributions of wealth.

It may be true that there is no single framework for discussing distributional goals, but Calabresi and Melamed's discussion of existing wealth distributions and merit goods provides two useful tools for showing why awarding initial entitlements to local communities will better reflect the distributional preferences of society at large.[263] At the moment, the blue anticommons is most effectively utilized by wealthy, powerful communities, and authors have already pointed out how offshore wind is thus at risk of

[256] *Id.* at 1093.

[257] *See* DuVivier, *supra* note 158.

[258] Calabresi & Melamed, *supra* note 239, at 1097.

[259] *Id.*

[260] *Id.*

[261] *See* Amaral, *supra* note 47, at 236.

[262] *See supra* Part I.C, noting that fishermen, homeowners, local businesses, and more may all have reasons to be wary of offshore wind development.

[263] *See* Calabresi & Melamed, *supra* note 239, at 1098–1100.

recreating historical inequalities.[264] If developers receive the initial entitlement, groups opposing offshore wind would have to pay them, either through negotiation or damages, to be able to push back against projects.[265] This has the potential to be even more damaging than the current situation, as it may further incentivize developers to build projects in communities less economically able to oppose them. Even if these inequalities are unavoidable, giving the initial entitlement to local communities preserves important merit goods, which Calabresi and Melamed define as particular goods that society deems essential for each individual.[266] Here, the right to have a say about what goes on near your community and safeguards against harmful projects can be thought of as merit goods. From Kahuku to Nantucket Sound, opposition to wind energy exists at some level across a wide range of communities.[267] Recognizing these merit goods could go a long way towards assuring local communities everywhere that their concerns are being taken seriously.

Finally, "other justice concerns" refers to reasons that, while they are not always easily explained, feel necessary for a satisfactory allocation of initial entitlements.[268] The most obvious concerns in this case are the ever-encroaching climate crisis and the related, dire need for renewable forms of energy.[269] Initially, this suggests awarding the initial entitlement to offshore wind developers, as their projects can generate electricity and long-term benefits for a wide range of parties outside of this particular conflict. However, the reasoning behind such a development-centered regime can easily be turned on its head. Coastal communities, rich or poor, are already on the frontlines of climate

[264] *E.g.*, Lockman, *supra* note 153, at 29, 33.

[265] *See supra* Figure C, Rules One and Two.

[266] Calabresi & Melamed, *supra* note 239, at 1100–01.

[267] *See* Lockman, *supra* note 153, at 49.

[268] Calabresi & Melamed, *supra* note 239, at 1105.

[269] *See*, *e.g.*, Alexandra B. Klass, *Property Rights on the New Frontier: Climate Change, Natural Resource Development, and Renewable Energy*, 38 ECOLOGY L.Q. 63, 66 (2011) ("[T]here is growing consensus that natural resource development . . . will be critical in creating a comprehensive solution to the climate change problem.").

change. [270] It may create an economically inefficient or distributionally undesirable outcome, but these communities deserve a voice before shouldering the costs of the transition to renewable forms of energy.[271] Another issue is that when concerns are legitimate, they must be taken more seriously than the large amounts of bogus claims holding up projects and causing the blue anticommons.[272] Even if legitimate claims are one in a hundred, awarding the initial entitlement to opponents of offshore wind avoids the risk of overlooking them in the first place.

Once opponents of offshore wind, here the limiting party, receive the initial entitlement, Rules One and Two of the Model are eliminated.[273] The discussion above helps illustrate that neither of these would be an effective solution. Rule One would award developers an entitlement to build offshore wind projects, and local communities would be unable to oppose these projects unless developers allowed it. [274] The point of using the Model is to incentivize offshore wind, but this would go too far, wiping out the potential merit goods described above and forcing projects on local communities with no accompanying compensation. Rule Two would make communities pay damages to developers for any cancellations and delays of projects mired in litigation gridlock.[275] In addition to the distributional inequalities this would create, as shown above, such a rule would be wildly inefficient. Nantucket Residents Against Turbines or the Responsible Offshore Development Alliance could win a case in the near future that forces Vineyard Wind to close its doors, but it would still hardly

[270] *See* Mark S. Osler et al., *Fifth National Climate Assessment: Chapter 9, Coastal Effects*, U.S. GLOBAL CHANGE RESEARCH PROGRAM (2023), https://nca2023.globalchange.gov/chapter/9/ [https://perma.cc/6VBM-DNYM]. Even at lower-end estimates, scientists predict significant impacts for coastal communities. *Id.*

[271] *See* Scott McFetridge, *New Rebellion Against Wind Energy Stalls or Stops Projects*, WASHINGTON POST (Feb. 20, 2018), https://www.washingtonpost.com/national/new-rebellion-against-wind-energy-stalls-or-stops-projects/2018/02/20/8fd83d10-1663-11e8-930c-45838ad0d77a_story.html [https://perma.cc/H3HR-QEWD] (describing resentment among some communities that clean energy is pursued with little thought of its costs).

[272] *See* O'Brien, *supra* note 30.

[273] *See supra* Figure C.

[274] *Id.*

[275] *Id.*

seem fair to make either of them solely responsible for paying damages under a Rule Two system.[276] If the party whose claim forces a project's termination is not responsible, however, the costs of assigning responsibility and forcing all the various opponents over a project's lifetime to pay up would be astronomical. Rules One and Two fail to address distributional and efficiency concerns, and for those same reasons opponents of offshore wind deserve the initial entitlement.

B. *Choosing Between Property and Liability Rules*

After entitling opponents of offshore wind, the legal system, through either Congress or the courts, must then decide the Model's second order question of whether to protect that entitlement through a property or liability rule.[277] Rule Three employs a property rule, meaning opponents of offshore wind could limit projects at will unless opponents and developers voluntarily agree otherwise.[278] Rule Four would protect that same entitlement with a liability rule, empowering developers to overcome the initial entitlement by paying its objectively determined valuation.[279] There is significant scholarship comparing these two rules, but even Calabresi and Melamed recognized case by case analysis will nearly always be necessary to judge which rule fits best.[280] In this case, the liability rule of Rule Four works best.

Rule Three would not represent a significant change from the dysfunctional system that currently exists, and as such it would only reinforce the inefficient and unjust outcomes associated with that system. The current system essentially protects groups' rights to limit offshore wind development with a property rule. Opponents of offshore wind, if well-funded, can exercise their exclusionary right unless they voluntarily agree otherwise with developers.[281] CBAs are an example of what such voluntary

[276] *See, e.g.*, *supra* note 137. While these groups proudly display their petitions to the Supreme Court, it is unlikely that any of them would be as willing to shoulder the full costs of a Rule 2 system.

[277] Calabresi & Melamed, *supra* note 239, at 1092.

[278] *See supra* Figure C.

[279] *Id.*

[280] *See* Rule, *supra* note 223, at 231 (advocating for a case specific analysis for applying the Model to wind wake interference).

[281] *See supra* Part I.C.

agreements could look like, but even these are inefficient.[282] Just as Calabresi and Melamed describe individual landowners who are able to hold out for higher sums when their land is protected by a property rule,[283] opponents of offshore wind are incentivized to claim, true or not, that their right to limit offshore wind development is worth more to them than developers are offering. The current system also creates unjust outcomes. First, opponents of offshore wind are rewarded with a property rule when the entitlements they hold are only attenuated rights of exclusion to begin with. Second, this property rule is most enforceable by wealthy, powerful groups, so developers are incentivized to build offshore wind projects where communities lack the resources to enforce this property rule themselves.[284]

In stark contrast, Rule Four would spur offshore wind development and protect local communities equally through compensation. Liability rules come with their own problems,[285] but in general they are preferable where transaction costs are high and voluntary bargaining between parties is unlikely to be successful.[286] The lack of success so far and the large number of parties involved suggests this is an ideal scenario for a liability rule. While liability rules are often overlooked and less common in practice, authors have pointed to *Spur Industries, Inc. v. Del E. Webb Development Co.*, an Arizona Supreme Court case from 1972, as an example of what Rule Four can look like between private parties.[287] In that case, the court ordered the defendant, a cattle feedlot operator, to relocate its business on account of the harm it was causing the plaintiff's nearby real estate developments.[288] However, the plaintiff was ordered to pay damages to compensate the defendant for their costs.[289] In essence, the court in that case employed a liability rule that allowed the plaintiff to overcome the defendant's entitlement

[282] *See supra* Part II.B and discussion of CBAs.

[283] *See* Calabresi & Melamed, *supra* note 239, at 1106–07. In their example, individual landowners can prevent a local government from building a park by hiding their true valuations and holding out for more. *Id.*

[284] *See* Lockman, *supra* note 153, at 30–31.

[285] *See* Calabresi & Melamed, *supra* note 239, at 1108.

[286] Rule, *supra* note 223, at 230.

[287] *Id.* at 211; *see also* Spur Indus., Inc. v. Del E. Webb Dev. Co., 494 P.2d 700, 706 (Ariz. 1972).

[288] *See Spur Industries*, 494 P.2d at 708.

[289] *Id.*

through payment.[290] A similar rule here would solve both sides of the offshore wind problem. First, it would allow developers to overcome stubborn opposition and break out of the blue anticommons. Second, many communities have voiced concerns about a lack of payment mechanisms since stakeholder meetings for Cape Wind, and this would be a comprehensive response to those concerns.[291] Some authors have already recognized that paying groups who oppose wind energy could lessen harmful litigation, but no consistent system has yet been proposed that accurately addresses the ownership problem.[292] Under a Rule Four system, the legal system would recognize the initial entitlement of groups to oppose and limit offshore wind development, but developers would actually be able to overcome that entitlement by paying groups an objectively-determined value.

C. *Implementation of a Rule Four System and Potential Limitations*

Rule Four shows how to incentivize offshore wind in theory, but implementation of such a system, whether by statute or through the courts, will not be as simple. Successful implementation will require modifying Rule Four to respond to the strongest anticipated objections, finding an effective way to value the entitlement held by opponents of offshore wind, and ensuring that those valuations can actually be met. First, while a liability rule will help incentivize offshore wind, the reality is that most entitlements are mixed.[293] Creating a mixed entitlement in this case would ensure that legitimate claims from opponents of offshore wind are taken seriously and that the public retains some say over the use of ocean spaces. The most effective way to do this would be to have the Rule Four system activate once a project has received final approval through the standard permitting process. In that mixed system, developers would be free to pay local communities and enjoin them from challenging projects once the relevant

[290] Rule, *supra* note 223, at 238 (remarking that the court "unknowingly" applied Rule Four).

[291] *See* Watson & Courtney, *supra* note 189, at 283.

[292] *See, e.g.*, Martin, *supra* note 155, at 462–65; *see also* Hays, *supra* note 103, at 270.

[293] Calabresi & Melamed, *supra* note 239, at 1093 (noting that the type of rule, property, liability, or inalienability, often depends on the circumstances by which the entitlement is given up).

agencies give those projects a green light. If the agencies decline to do so, however, opponents of offshore wind would retain their current ability to challenge projects in litigation, protected by a property rule. CWA, for example, would have been unable to use a liability rule while the Wampanoag tribe's NHPA claim was still being investigated.[294] In contrast, Vineyard Wind, which received final approval in 2021, would have been able to pay groups at that time and shield itself from future litigation.[295] A mixed Rule Four system would help get rid of needless litigation and delays while making sure local communities receive adequate compensation and offshore projects are still subject to rigorous review.

Second, any system employing a liability rule must have an effective way of valuing the entitlements at stake and making sure those valuations can be met.[296] As part of the current permitting process, agencies gather large amounts of data on the effects of offshore wind projects, and that data is the ideal source for valuing the entitlements held by local communities and opponents of offshore wind.[297] Though this data would likely need to be improved, agencies are already measuring, for example, how projects affect specific fisheries, down to individual species of fish.[298] Developers and opponents of offshore wind will be the parties in any later transaction, so having a third party value entitlements will decrease the cost of valuation, even if it doesn't

[294] See O'Brien, *supra* note 30, for further discussion of NHPA claims brought against Cape Wind.

[295] *See* Press Release, U.S. Dep't of Interior, Biden-Harris Administration Approves First Major Offshore Wind Project in U.S. Waters (May 11, 2021), https://www.doi.gov/pressreleases/biden-harris-administration-approves-first-major-offshore-wind-project-us-waters [https://perma.cc/X9D9-2FQ6] (summarizing Vineyard Wind's final Record of Decision).

[296] Calabresi & Melamed, *supra* note 239, at 1107 ("If society can remove from the market the valuation of each tract of land, decide the value collectively, and impose it, then the holdout problem is gone.").

[297] *E.g.*, *Maryland Offshore Wind Final Environmental Impact Statement*, BUREAU OF OCEAN ENERGY MGMT. (July 29, 2024), https://www.boem.gov/renewable-energy/state-activities/maryland-offshore-wind-final-environmental-impact-statement-eis [https://perma.cc/PE6G-74ZM].

[298] *See*, *e.g.*, Fiona Hogan et al., *Fisheries and Offshore Wind Interactions: Synthesis of Science*, NAT'L OCEANIC AND ATMOS. ADMIN. (2023), https://doi.org/10.25923/tcjt-3a69 [https://perma.cc/NWS4-HSBG].

ensure those entitlements are not under- or over-valued.[299] Agencies could issue valuations as part of the final approval necessary in the mixed system described above, and developers would then be free to weigh the cost of meeting those valuations versus letting litigation challenges drag on. Given the amount opponents of offshore wind have been willing to spend, limited data that exists for measuring effects of offshore wind on the fishing industry, and figures from some projects' CBAs, the total payments developers would have to make under a mixed Rule Four system could go well into the millions. However, this is not as big of a roadblock as it seems. Vineyard Wind won the lease to its location at auction in 2018 with a bid of over $135 million, and five separate leases off the Pacific coast went for over $130 million each in December of 2022.[300] With the knowledge that a Rule Four system could demand payments later, developers, guided by the invisible hand, would bid less in the first place. In this way, Rule Four would also be the opposite of government overreach. Developers would pay less to the federal government to lease ocean space, instead compensating the local communities most affected by projects. Liability rules might not always be the right solution,[301] and in this case a mixed system can effectively balance incentivizing offshore wind with holding offshore wind projects and their developers accountable to local communities.

Even if a Rule Four system, modified in the ways described above, is successfully implemented, problems may remain for

[299] Calabresi & Melamed, *supra* note 239 at 1108, 1110. Because the goal of liability rules is to use collective valuation when the alternative is too expensive, not to give parties the price they would have actually sold their entitlement, these rules may result in under or over-compensation.

[300] *See* Press Release, U.S. Dep't of Interior, BIDDING BONANZA! Trump Administration Smashes Record for Offshore Wind Auction with $405 Million in Winning Bids (Dec. 14, 2018), https://www.doi.gov/pressreleases/bidding-bonanza-trump-administration-smashes-record-offshore-wind-auction-405-million [https://perma.cc/X4GW-VVU4]; Press Release, U.S. Dep't of Interior, Biden-Harris Administration Announces Winners of California Offshore Wind Energy Auction (Dec. 07, 2022), https://www.doi.gov/pressreleases/biden-harris-administration-announces-winners-california-offshore-wind-energy-auction [https://perma.cc/KL3C-M6BL].

[301] *See, e.g.*, Daphna Lewinsohn-Zamir, *The Choice Between Property Rules and Liability Rules Revisited: Critical Observations from Behavioral Studies*, 80 TEX. L. REV. 219, 221 (2001).

offshore wind. Most importantly, the battlefield may simply shift from courts to voting booths. If parties are no longer able to challenge offshore wind projects in court, either directly or indirectly, through agency decisions, they may refocus on the agencies themselves. In this modified Rule Four system, agencies would control the decision that kicks the liability rule into gear and the valuation system used for that liability rule. Whether it's DOI, DOE, BOEM, or some combination of agencies, the agency personnel making these decisions could change drastically between administrations.[302] Though renewable energy and wind in particular have long been popular, public opinion has become significantly more divided along political lines in recent years.[303] This might make offshore wind a high-risk, high-reward game, as an unfavorable administration could spell four or eight down years for the industry. [304] However, the argument about perverse consequences is less convincing given that offshore wind is already an uncertain and volatile business.[305]

Additionally, Rule Four may be necessary, but not sufficient, to help offshore wind reach its full potential. This system

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[302] *See* Coral Davenport & Lisa Friedman, *With Ready Orders and an Energy Czar, Trump Plots Pivot to Fossil Fuels*, N.Y. TIMES (Nov. 8, 2024), https://www.nytimes.com/2024/11/08/climate/trump-transition-epa-interior-energy.html [https://perma.cc/2AEN-GTJV]. The authors point to the exodus of employees from the Department of the Interior during the first Trump administration, noting that more of the same could be on the way. *Id.*

[303] Alec Tyson & Brian Kennedy, *How Americans View National, Local and Personal Energy Choices*, PEW RESEARCH CENTER (June 27, 2024), https://www.pewresearch.org/science/2024/06/27/how-americans-view-national-local-and-personal-energy-choices/ [https://perma.cc/74F2-ZKB7] (discussing the decline in support for wind power despite support in general for renewable energy).

[304] For further discussion of how the industry is currently planning to deal with a potential four-year downturn, *see* Kirk Moore, *Offshore Wind Industry Makes Plans to Work with the Incoming Trump Administration*, WORKBOAT (Nov. 15, 2024), https://www.workboat.com/wind/offshore-wind-industry-braces-for-trump-s-day-one [https://perma.cc/E8BS-JJMJ].

[305] *See generally* ALBERT O. HIRSCHMAN, THE RHETORIC OF REACTION 11-42 (1991) for examples of other, similar arguments from perversity; *see also*, *e.g.*, Heather McCarron, *'Much uncertainty.' Cape, Mass. Leaders See Political Shifts That May Slow Offshore Wind*, CAPE COD TIMES (Jan. 3, 2025, at 05:05 ET), https://www.capecodtimes.com/story/news/2025/01/03/massachusetts-cape-cod-offshore-wind-avangrid-vineyard-nantucket-southcoast-cyr-xiarhos/77112973007/ [https://perma.cc/992S-NRXA].

would get rid of gridlock provided agencies issue sufficient findings in favor of projects, but agency processes themselves can still be improved.[306] Things like REMR, though they may not be able to fix offshore wind's current problems on their own, will be crucial to make sure a Rule Four system is supported by a clearly-defined permitting process.[307] Developers are used to raising large amounts of capital to fund offshore wind projects, but payments under a Rule Four system could still impose new burdens. Financial incentives, such as those described earlier, will likely remain necessary elements of any comprehensive plan to incentivize offshore wind.[308]

CONCLUSION

Many coastal communities today are pushing back against offshore wind projects, fearing what these projects may do to their livelihoods or their way of life.[309] As a result, offshore wind energy is trapped in a blue anticommons, and developers face sometimes insurmountable gridlock.[310] Grimsby, a small, English port city, once shared those same fears, but offshore wind caused its economy to boom and is now hailed as the city's economic savior.[311] Offshore wind projects and local communities can coexist in ways that are not merely bearable, but mutually beneficial.[312] Rule Four presents developers and local communities in the United States

[306] *See supra* Part I.B.

[307] For a discussion of how REMR will result in significant cost savings for offshore wind developers but left significant improvements on the table, *see* Josh Kaplowitz et al., *The Implications and Opportunities of the Renewable Energy Modernization Rule*, S&P GLOBAL COMMODITY INSIGHTS (June 2024), https://commodityinsights.spglobal.com/rs/325-KYL-599/images/The%20implications%20and%20opportunities%20of%20the%20Renewable%20Energy%20Modernization%20Rule.pdf?version=0 [https://perma.cc/F5T2-EJZZ].

[308] *See supra* Part I.B.

[309] *See, e.g.*, Nichola Groom, *US Offshore Wind Opponents Seek to Form National Group to Fight Project*s, REUTERS (Aug. 8, 2024, at 12:21 ET), https://www.reuters.com/business/energy/us-offshore-wind-opponents-seek-form-national-group-fight-projects-2024-08-08/ [https://perma.cc/4REE-LS34].

[310] *See supra* Part I.C.

[311] Taylor J. LeMay, *Offshore Wind: Lessons from Abroad*, 7 LSU J. ENERGY L. & RESOURCES 159, 160 (2019).

[312] *Id.* at 192.

with the opportunity to take a meaningful step out of the blue anticommons and towards the type of beneficial coexistence that other countries have embraced. The Model was surely not developed with offshore wind in mind,[313] so the possibility remains that offshore wind may require a more finely tailored solution in the future.[314] However, this approach demonstrates that it is possible to achieve two, seemingly at-odds, goals at once. Rule Four would free offshore wind from the current gridlock while making sure local communities are fairly compensated for the value they are providing to the rest of society. Offshore wind remains one of the best shots at transitioning to renewable energy sources,[315] and this approach would incentivize its development while making sure this clean energy source keeps its hands clean along the way.

[313] *See supra* notes 9, 239, and accompanying text. Calabresi & Melamed's Cathedral Model was introduced nineteen years prior to the first operational offshore wind farm.

[314] *See* DuVivier, *supra* note 158.

[315] *See supra* note 28 and discussion of added benefits of offshore as compared to other sources of renewable energy.