

## CLIMATE ENTRENCHMENT IN UNSTABLE LEGAL REGIMES

*Martin Lockman*<sup>†</sup>

**ABSTRACT**—American climate law is the subject of serious and ongoing debate, and policy change is part of the ordinary process of democratic governance. However, in recent years some policymakers have deliberately undermined climate action by injecting legal instability into American climate law. This Essay addresses a simple question: how can Americans build necessary climate infrastructure in the face of an unstable political and legal regime?

Some readers may be shocked by this question. Indeed, this framing is intentionally provocative. However, this Essay recognizes a simple fact: not all American polities, and not all American policymakers, are trustworthy and predictable partners for climate infrastructure projects. Further, American climate law contains significant sources of instability which can be exacerbated by political sabotage. Actions that undermine public climate commitments create a genuine risk for both the legitimacy of American governance and the material well-being of Americans in the face of the global climate crisis.

This Essay proposes a tool kit for protecting climate infrastructure from political interference. Part I identifies sources of legal instability in America’s response to the climate crisis, places it in a theoretical context, and discusses the costs of this political instability. Part II discusses the ethical issues involved in preempting political instability in a democracy and concludes that addressing climate change aligns with historical ethical justifications for entrenchment in American law. Finally, Part III outlines doctrinal, contractual, and political techniques to entrench climate policy and protect climate infrastructure from political interference.

**AUTHOR**—Climate Law Fellow and Associate Research Scholar at Sabin Center for Climate Change Law at Columbia Law School. The views expressed herein are solely my own and do not reflect the views of my employers, past, present, or future. I am grateful to Professor Michael B.

---

<sup>†</sup> This Essay is published as part of the Northwestern University Law Review’s online essay series. The 2022 topic is “Climate Change & Infrastructure: Existential Threats to Our Built Environment.”

Gerrard for his invaluable feedback on an early draft of this paper, and to the staff of the Northwestern University Law Review for their hard work and thoughtful comments.

INTRODUCTION.....	99
I. AMERICA’S CLIMATE INSTABILITY .....	103
A. Sources of Legal Instability .....	103
B. Costs of Instability .....	106
II. THE ETHICS OF CLIMATE ENTRENCHMENT .....	109
III. TECHNIQUES FOR ENTRENCHING CLIMATE LAW.....	112
A. Policy Entrenchment .....	112
B. Project Entrenchment .....	118
CONCLUSION.....	125

## INTRODUCTION

June 20, 1979 was almost a landmark day in climate history. That morning, “President Carter climbed atop the roof of the White House . . . and, amid a noonday blaze of solar power, dedicated a solar heating system and announced his solar energy plan.”<sup>1</sup> This plan, which set an ambitious goal of a twenty percent renewable grid by the year 2000, was the symbolic culmination of several years of energy-focused legislation from the Carter Administration.<sup>2</sup> At the newly founded Solar Energy Research Institute (SERI), a branch of the nascent Department of Energy, a team of researchers busily prepared a report outlining pathways to achieve Carter’s goal.<sup>3</sup>

Just over one year later, President Carter was defeated in the 1980 election by Ronald Reagan, an avowed opponent of the Department of Energy.<sup>4</sup> The newly appointed Reagan official in charge of SERI, Frank DeGeorge, ordered the report’s authors to “stop all expenditures immediately, and to destroy all drafts and background documents.”<sup>5</sup> The

---

<sup>1</sup> Martin Tolchin, *Carter Welcomes Solar Power*, N.Y. TIMES, June 21, 1979, at D1.

<sup>2</sup> *Id.*

<sup>3</sup> WILLIAM H. RODGERS, JR. & ELIZABETH BURLESON, *RODGERS ENVIRONMENTAL LAW* § 21:14 (2d ed. 2020).

<sup>4</sup> See Howell Raines, *Reagan Adopts Plan to End Energy Dept. and Shift Its Duties*, N.Y. TIMES, Dec. 17, 1981, at A1 (discussing President Reagan’s campaign promise to abolish the Department of Energy, and describing his attempts to eliminate the department in his first year in office).

<sup>5</sup> RODGERS & BURLESON, *supra* note 3 (quoting Denis Hayes, *Renewable Energy and the Reagan Revolution: An Unstoppable Force Derailed by an Immovable Object*, in CLIMATE CHANGE: A READER 516, 519 (William H. Rodgers Jr. et al., eds., 2011)).

20% Solar Plan was abandoned. Several years later, the Reagan administration quietly removed Carter's solar panels.<sup>6</sup>

In August of 2022, after nearly a year of back-and-forth negotiations, a triumphant President Biden signed the Inflation Reduction Act (IRA).<sup>7</sup> The IRA, which passed the Senate in a 51–50 party-line vote,<sup>8</sup> contained the largest package of climate spending in American history, including \$17 billion in consumer tax credits for electric car purchases.<sup>9</sup> Recent analysis by Bloomberg suggests that, because of the IRA's incentives, by 2030 electric vehicles will make up more than 50% of passenger cars sold in the United States.<sup>10</sup>

However, while some politicians fought to ease the climate transition, others were working to undermine it. In May of 2022, five North Carolina State Representatives introduced a bill to eliminate electric car chargers, without any clear policy goal other than sabotage.<sup>11</sup> The proposed bill

<sup>6</sup> See AP, *White House Will Not Replace Solar Water-Heating System*, N.Y. TIMES, Aug. 24, 1986, at 24.

<sup>7</sup> Ben Lefebvre et al., *Historic Climate Bill to Supercharge Clean Energy Industry*, POLITICO (Aug. 7, 2022, 4:53 PM), <https://www.politico.com/news/2022/08/07/inflation-reduction-act-climate-biden-00050230> [<https://perma.cc/E6DL-9T4B>]; Barbara Sprunt, *Biden Signs Sweeping Climate, Health Care, Tax Bill into Law*, NPR (Aug. 16, 2022, 4:35 PM), <https://www.npr.org/2022/08/16/1117709411/biden-signs-sweeping-climate-health-care-tax-bill-into-law> [<https://perma.cc/3LRW-2BM6>].

<sup>8</sup> See Sprunt, *supra* note 7 (“After a marathon voting session, the Senate passed the legislation through the budget reconciliation process, with every Democrat voting in favor and one tie-breaking vote from Vice President Harris. No Republicans voted for the bill.”).

<sup>9</sup> See *Understanding the Inflation Reduction Act*, COUNCIL OF STATE GOV'TS (Aug. 16, 2022), <https://www.csg.org/2022/08/16/understanding-the-inflation-reduction-act/> [<https://perma.cc/T82Y-QQ3Z>] (summarizing the IRA's climate spending provisions).

<sup>10</sup> Ira Boudway, *More than Half of US Car Sales Will be Electric by 2030*, BLOOMBERG (Sept. 20, 2022, 4:59 PM), <https://www.bloomberg.com/news/articles/2022-09-20/more-than-half-of-us-car-sales-will-be-electric-by-2030> [<https://perma.cc/N7RP-H5MP>].

<sup>11</sup> Representative Ben Moss, one of the sponsors of the bill, described the logic more charitably: “Taxpayers should not be footing the bill for ‘free’ electric vehicle charging stations on state and local government property unless the same locations offer gasoline or diesel fuel at no charge.” Ben Moss (@BenMossNC), TWITTER (July 2, 2022, 7:04 AM), <https://twitter.com/BenMossNC/status/1543204081451270144> [<https://perma.cc/DD7A-U7MX>]. Automotive industry commentators, however, were quick to argue that electricity costs a fraction of the equivalent gasoline and diesel, that the bill placed onerous and seemingly nonsensical disclosure requirements on private businesses, and that, broadly speaking, the concept of “Equitable Free Vehicle Fuel” addressed a nonexistent problem. See Erin Marquis, *North Carolina Republicans Want to Ban Free EV Chargers Unless Offered with Free Gas and Diesel*, JALOPNIK (June 14, 2022), <https://jalopnik.com/north-carolina-republicans-want-to-ban-free-ev-chargers-1849057951> [<https://perma.cc/9K2Z-NTKN>] (“This bill is likely nothing more than a time-waster to score political points . . .”); Jonathon Ramsey, *North Carolina Bill Seeks to End the Scourge of Free EV Chargers*, AUTOBLOG (June 8, 2022, 7:30 AM), <https://www.autoblog.com/2022/06/08/north-carolina-legislature-house-bill-1049-free-ev-charging/> [<https://perma.cc/SZ2R-D87Q>] (noting that “North Carolina appears to be at war with itself over EV charging in the state,” and arguing that “[t]he subtext of [the bill] . . . is as disingenuous it is absurd”); Nico DeMattia, *A North Carolina Bill Would Ban Free Public EV Chargers Unless They Offer Free Gas Too*, THE DRIVE (July 10, 2022, 5:12 PM), <https://www.thedrive.com/news/a-north-carolina-bill-would-ban-free-public-ev-chargers-unless-they->

effectively bans public charging stations, mandates onerous price disclosures to shame businesses who choose to provide private chargers, and, in a move more symbolic than pragmatic, sets aside \$50,000 in funds to destroy noncompliant charging stations.<sup>12</sup>

American climate law is the subject of serious and ongoing debate, and policy change is part of the ordinary process of democratic governance. However, some policymakers have taken steps to deliberately undermine climate action by injecting legal instability. The scope of this climate sabotage is becoming increasingly clear. In August of 2022, the New York Times exposed coordinated efforts by Republican state treasurers to “punish” banks and investment firms that make climate-conscious investments.<sup>13</sup> Although treasurers have traditionally been viewed as nonpartisan and technocratic actors, these state treasurers worked to pass anti-divestment laws and bar climate-conscious companies from doing business with state governments, sometimes at enormous costs to the states they govern.<sup>14</sup> By creating uncertainty, political sandbagging can derail climate investment even without formal policy change.

The solution to this uncertainty is clear: Congress must immediately pass aggressive, fully funded legislation to build publicly owned renewable facilities, remove atmospheric carbon, and strengthen our physical and social infrastructure to withstand increasing climate-driven catastrophes. This legislation must be implemented in partnership with enthusiastic state and local governments, and interpreted predictably, swiftly, and consistently by a judiciary that recognizes the urgency of climate action.

Sure.<sup>15</sup>

---

offer-free-gas-too [<https://perma.cc/VV9Z-AXDR>] (“Aside from pure political theater, I struggle to see a real reason to introduce such a bill . . .”); Ezra Dyer, *North Carolina Looks to Remove Public EV Chargers, Probably to the Trash*, CAR AND DRIVER (July 7, 2022), <https://www.caranddriver.com/news/a40543385/north-carolina-wants-remove-free-public-ev-chargers/> [<https://perma.cc/5KS8-6ZHR>] (“Politicians have to run on some kind of platform, and Ben Moss—my incoming state House representative here in North Carolina’s District 52—decided that his animating principle is Being Mad at Electricity.”).

<sup>12</sup> H.B. 1049, 2021 Gen. Assemb., Reg. Sess. (N.C. 2022).

<sup>13</sup> David Gelles, *How Republicans Are ‘Weaponizing’ Public Office Against Climate Action*, N.Y. TIMES (Aug. 5, 2022), <https://www.nytimes.com/2022/08/05/climate/republican-treasurers-climate-change.html> [<https://perma.cc/L9JY-6U2L>].

<sup>14</sup> *Id.*; see also DANIEL G. GARRETT & IVAN T. IVANOV, GAS, GUNS, AND GOVERNMENTS: FINANCIAL COSTS OF ANTI-ESG POLICIES 29–30 (2023), <https://ssrn.com/abstract=4123366> [<https://perma.cc/BB5J-D4DY>] (finding that Texas policies designed to punish banks that divest from the oil sector will cost Texas municipalities “about \$416 million a year in additional borrowing costs.”).

<sup>15</sup> “Why not just wait for national and international processes to adopt and implement an effective government response? Although the implications of the climate science have been explored at length elsewhere, the continued promotion of mitigation measures that will take many years to adopt and implement suggests the need to explain the basis for urgency.” Michael P. Vandenbergh & Jonathan A.

This Essay seeks to answer a different question: how can Americans build necessary climate infrastructure in the face of an unstable political and legal regime?

Some readers may be shocked by this question. Indeed, this framing is intentionally provocative—isolated incidents of interjurisdictional conflict, legal ambiguity, or policy change do not amount to an unstable legal system. However, this Essay recognizes a simple fact: not all American polities, and not all American policymakers, are trustworthy and predictable partners for climate infrastructure projects. Furthermore, American climate law contains significant sources of instability which can be exacerbated by political sabotage. Actions that undermine public climate commitments create a genuine risk for both the legitimacy of American governance and the material well-being of Americans in the face of the global climate crisis.

This Essay sets out a tool kit for protecting climate infrastructure from political interference. Part I identifies sources of legal instability in America's response to the climate crisis, places it in a theoretical context, and discusses the costs of this political instability. Part II discusses the ethical issues involved in preempting political instability in a democracy and concludes that addressing climate change aligns with historical ethical justifications for entrenchment in American law. Finally, Part III outlines doctrinal, contractual, and political techniques to entrench climate policy and protect climate infrastructure from political interference.

Given the staggering array of jurisdictions, infrastructure projects, and political threats, this discussion is, by necessity, high-level. Predictability, however, is far from a novel objective in the law. Likewise, the legal mechanisms discussed in this Essay are not new—the primary goal of private law is to structure predictable commitments, and a vast body of legal literature addresses the predictability of governance commitments in a

---

Gilligan, *Beyond Gridlock*, 40 COLUM. J. ENV'T L. 217, 226–27 (2015); see also Munir Ahmed, *Pakistan Floods Leave Wrecked Lives, Half Million in Camps*, ASSOCIATED PRESS (Aug. 29, 2022), <https://apnews.com/article/floods-pakistan-islamabad-monsoons-0525c15774ce7046752f4a0c1c0e2c37> [<https://perma.cc/EN67-9LSC>] (discussing late-August floods in Pakistan that killed more than 1,000 people, damaged at least 1 million homes, and left half a million people in refugee camps); *Europe's Drought the Worst in 500 Years—Report*, BBC NEWS (Aug. 23, 2022), <https://www.bbc.com/news/world-europe-62648912> [<https://perma.cc/D7YT-CEAB>]; Laura Millan, *Climate Change Linked to 5 Million Deaths a Year, New Study Shows*, BLOOMBERG (July 7, 2021, 5:30 PM), <https://www.bloomberg.com/news/articles/2021-07-07/climate-change-linked-to-5-million-deaths-a-year-new-study-shows#xj4y7vzkg> [<https://perma.cc/ADR5-EF4D>] (discussing a study linking climate change to mass deaths); Rebecca Hersher, *Climate Change is Killing People, But There's Still Time to Reverse the Damage*, NPR (Feb. 28, 2022, 2:07 PM), <https://www.npr.org/2022/02/28/1082564304/billions-of-people-are-in-danger-from-climate-change-u-n-report-warns> [<https://perma.cc/K64J-T2KT>] (discussing United Nations reports outlining the growing material harms caused by climate change).

pluralist federal democracy.<sup>16</sup> Nor are these concepts inherently radical—each of the legal structuring techniques described in this Essay has a commonly accepted counterpart in private law, and most have been deployed to protect foreign direct investment in so-called “developing” countries.<sup>17</sup> Instead, the novelty of this Essay comes from its willingness to explicitly plan for an increasingly obvious fact: American political resistance to climate infrastructure creates a material political risk for private climate investments and a meaningful counterparty risk in public–private partnerships.

### I. AMERICA’S CLIMATE INSTABILITY

Readers may reasonably wonder whether anecdotes about individual sabotage represent broader systemic instability. Although Reagan significantly changed American energy policy, he was not able to dismantle the Department of Energy, and SERI survives as the National Renewable Energy Laboratory. The White House solar panels, while symbolic, barely dented the building’s carbon emissions. The North Carolina anti-charger bill seems unlikely to pass. Taken individually, none of the political anecdotes in this Essay represent an existential threat to climate action. Yet determining whether climate sabotage in the aggregate rises to the level of systemic instability remains an essential first step because the scope of the threat necessarily informs the scope of acceptable responses.

#### A. Sources of Legal Instability

All the examples of climate sabotage cited in this Essay so far have been carried out at the hands of Republicans, and it would be easy to dismiss climate sabotage as a partisan phenomenon. Americans’ views on climate change and its solutions are polarized like much else.<sup>18</sup> However, while

---

<sup>16</sup> See *infra* notes 53–57 and accompanying text.

<sup>17</sup> For example, widely available practitioner guidance recommends almost every legal strategy discussed in this Essay to mitigate political, regulatory, or other risks in international infrastructure investments. See Practical Law Finance, *Identifying and Managing Project Finance Risks*, THOMPSON REUTERS PRAC. L. (2021), <https://us.practicallaw.thomsonreuters.com/9-382-9356> [<https://perma.cc/9395-3UEL>]. Risk control mechanisms suggested by this guidance include “offshore reserve accounts” to mitigate currency risk and other payment risks, “government assurances” and other partnerships to minimize the risk of government interference with private investments, and preserving the threat of litigation through both local enforcement rights and bilateral investment treaty mechanisms. *Id.* Additionally, this guidance suggests that investors consider securing controversial “stabilization clauses” in government contracts that prevent host governments from taking “certain actions that may [] undermine the project’s cash flows.” *Id.*

<sup>18</sup> See Alec Tyson et al., *What the Data Says About Americans’ Views of Climate Change*, PEW RSCH. CTR. (Apr. 18, 2023), <https://www.pewresearch.org/fact-tank/2022/04/22/for-earth-day-key-facts-about-americans-views-of-climate-change-and-renewable-energy/> [<https://perma.cc/3ZPJ-PHAW>].

national rhetoric surrounding climate infrastructure may be an issue of partisan politics, climate policy is not a purely national issue. Legal battles over climate infrastructure have been fought in almost every state.<sup>19</sup> At the state and local level, climate law's instability clearly cannot be ascribed solely to one party. For example, many deeply right-wing states have become leaders in renewable energy development.<sup>20</sup> Even if we set aside partisan rhetoric and ignore obvious sources of climate opposition, such as personal investment in carbon-emitting sources, climate policy remains subject to significant sources of structural instability across the country.

This widespread resistance can be explained in part by the fact that the energy transition represents a transformation in the relationship between Americans and their infrastructure. Most Americans are used to thinking of energy infrastructure as largely invisible.<sup>21</sup> Traditional thermal energy generation has a limited physical footprint—while the harms of a coal mine or coal-fired power plant can be horrific, they are hidden from the vast majority of people.<sup>22</sup> In contrast, climate infrastructure projects such as wind farms and grid expansion cover large areas of land. Wind turbines in particular are huge, moving structures that must be built on unobstructed and highly visible terrain. Even those who support renewable energy in the abstract and consider themselves environmentalists may vigorously oppose local energy projects and resent their intrusion into a cherished landscape.<sup>23</sup>

---

<sup>19</sup> See HILLARY AIDUN ET AL., SABIN CTR. FOR CLIMATE CHANGE L., OPPOSITION TO RENEWABLE ENERGY FACILITIES IN THE UNITED STATES: MAY 2023 EDITION 3 (2023), [https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=1201&context=sabin\\_climate\\_change](https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=1201&context=sabin_climate_change) [<https://perma.cc/W3L2-DNP6>] (“In nearly every state, local governments have enacted laws and regulations to block or restrict renewable energy facilities, and/or local opposition has resulted in the delay or cancellation of particular projects . . . Alaska, Arizona, and Mississippi are the only states where we did not find either restrictions or controversies that meet our criteria.”).

<sup>20</sup> See Ella Nilsen, *‘The Sound of Money’: Wind Energy is Booming in Deep-Red Republican States*, CNN (Apr. 22, 2022, 9:20 AM), <https://www.cnn.com/2022/04/22/politics/wind-energy-oklahoma-republican-states-climate> [<https://perma.cc/2FAH-4Q3W>].

<sup>21</sup> See Richard F. Hirsh & Benjamin K. Sovacool, *Wind Turbines and Invisible Technology: Unarticulated Reasons for Local Opposition to Wind Energy*, 54 TECH. & CULTURE 705 (2013); Joseph Rand & Ben Hoen, *Thirty Years of North American Wind Energy Acceptance Research: What Have We Learned?*, 29 ENERGY RSCH. & SOC. SCI. 135 (2017).

<sup>22</sup> See Scott Malone, *Coal’s Hidden Costs Top \$345 Billion in U.S.-Study*, REUTERS (Feb. 16, 2011, 12:18 PM), <https://www.reuters.com/article/usa-coal-study-idAFN169888020110216> [<https://perma.cc/GY5N-YFRJ>] (discussing a study that attempted to quantify the annual costs of coal’s “hidden” impacts, including “elevated rates of cancer and other illnesses in coal-mining areas, environmental damage and lost tourism opportunities in coal regions where mountaintop removal is practiced and climate change resulting from elevated emissions of carbon dioxide from burning the coal”); see also Rand & Hoen, *supra* note 21, at 141 (“Negative attitudes stemming from the visual impacts of wind turbines may not occur simply because people dislike how turbines look; people also have become accustomed to an electricity system that is essentially ‘invisible’ to consumers owing to centralized infrastructure typically sited far from population centers.”).

<sup>23</sup> Hirsh & Sovacool, *supra* note 21, at 713.

Climate resistance is also fueled by the fact that climate change is a “delayed harm” threat while climate infrastructure has a clear and concentrated impact.<sup>24</sup> The costs of climate infrastructure are immediately and locally apparent—the benefits are often global and abstract.<sup>25</sup> This makes climate infrastructure particularly vulnerable to post-implementation policy reversals known as “backlash.”<sup>26</sup> Because even immediate and drastic climate action will take decades to halt or reverse climate change, effective climate policies risk a “backlash effect” through which policies come to be viewed as “broken,” attract significant political opposition, and become vulnerable to long-term repeal or “reform.”<sup>27</sup>

Renewable energy facilities are also significant industrial sites with real externalities,<sup>28</sup> and not all anti-renewable activism represents intentional climate sabotage. Infrastructure construction is a heavily regulated arena and often involves collaboration across multiple jurisdictions and levels of government. As a result, seemingly secure climate policy gains may be open to collateral attack from multiple sources. Where so many constituencies and policymakers influence the development of climate infrastructure, both good faith and bad faith actors may oppose a single project. Well-meaning or otherwise, this legal volatility creates risks for climate action.

This instability is further exacerbated because climate infrastructure development raises many novel legal questions. For example, while wind turbines have been deployed commercially for several decades, most American jurisdictions do not have clearly defined property rights surrounding wind.<sup>29</sup> This is a problem “because the use of windstreams is rivalrous,” and upwind obstacles interfere with downwind energy use—a phenomenon known as the ‘wake effect.’”<sup>30</sup> Wind law’s ambiguity means

---

<sup>24</sup> See Eric Biber, *Climate Change and Backlash*, 17 N.Y.U. ENV'T L.J. 1295, 1298–99 (2009) (discussing the nature of climate change as a “delayed harm,” and noting that “[t]he full impact of all greenhouse gas emissions to this point in time has not been felt; instead, it will take decades or even centuries for that impact on the global climate system to be completely realized”).

<sup>25</sup> Ann M. Eisenberg, *Transitions in Energy Communities*, 12 GEO. WASH. J. ENERGY & ENV'T L. 103, 105 (2021).

<sup>26</sup> Biber, *supra* note 24, at 1298–99.

<sup>27</sup> *Id.* at 1337–38.

<sup>28</sup> For an overview of the conflicts and practical considerations that may arise in the process of renewable development, see generally TROY A. RULE, *SOLAR, WIND AND LAND: CONFLICTS IN RENEWABLE ENERGY DEVELOPMENT* (2014) (addressing property conflicts between renewable energy facilities and their neighbors). See also Rusty Rumley et al., Okla. Coop. Extension Serv., *Impacts of Wind Leasing Projects*, in WIND ENERGY LEASING HANDBOOK 49–61 (2017) (discussing concerns with wind development from the host community perspective).

<sup>29</sup> See generally Martin Lockman, *Fencing the Wind: Property Rights in Renewable Energy*, 125 W. VA. L. REV. 27 (2022) (discussing wind ownership regimes).

<sup>30</sup> *Id.* at 40–41.



that litigation surrounding wind wakes remains high risk and difficult to predict.<sup>31</sup> Political opponents of wind infrastructure have already seized on this uncertainty.<sup>32</sup> Patricia Muscarello—an activist that Judge Richard Posner described as “a pertinacious foe of wind farms”—has launched a series of lawsuits, arguing that permitting wind development destroys her private right to the windstream over her many properties.<sup>33</sup> This argument is not entirely frivolous, and while Muscarello has been unsuccessful to date, this kind of litigation could broadly reallocate windstream rights and devastate wind development.

Finally, this uncertainty is amplified on all fronts by the unwillingness of American courts to address climate policy’s volatility head-on. Professor Katrina Fischer Kuh argues that many “courts have avoided engaging core questions of climate policy,” instead “invoking a range of threshold procedural and jurisdictional rationales grounded wholly or substantially in concerns about the proper and legitimate role of the judiciary in constitutional democracy.”<sup>34</sup> While commentators may disagree on the appropriateness of such judicial restraint, it renders the courts an at-best unpredictable tool to directly protect climate action from destructive political volatility. The combination of these factors means that climate change-related infrastructure projects are often built under the specter of significant legal uncertainty.

### B. *Costs of Instability*

Legal instability and political contestation create unique risks for renewable energy development because America increasingly relies on private investment to meet its climate goals.<sup>35</sup> The vast majority of the IRA’s climate spending takes the form of incentives, subsidies, and tax credits

---

<sup>31</sup> See, e.g., RULE, *supra* note 28, at 190 (describing a wind wake conflict between two wind developers that settled out of court, in part because both developers realized that the law governing their dispute was “totally unclear.”).

<sup>32</sup> See *Muscarello v. Winnebago Cnty. Bd.*, 702 F.3d 909, 912 (7th Cir. 2012); see also *Muscarello v. Ogle Cnty. Bd. of Comm.*, 610 F.3d 416 (7th Cir. 2010). This uncertainty has also generated significant litigation between neighboring wind developers themselves. See Lockman, *supra* note 29, at 40–43 (discussing conflicts between wind developers and their neighbors over interference with windstreams).

<sup>33</sup> *Winnebago Cnty.*, 702 F.3d at 912; see also *Ogle Cnty.*, 610 F.3d. 416.

<sup>34</sup> Katrina Fischer Kuh, *The Legitimacy of Judicial Climate Engagement*, 46 *ECOLOGY L.Q.* 731, 743–44 (2019).

<sup>35</sup> Joshua D. Sarnoff, *Government Choices in Innovation Funding (with Reference to Climate Change)*, 62 *EMORY L.J.* 1087, 1100–01 (2013) (noting that governments addressing climate change often “rel[y] on private funding, property rights, and markets that are subject to government regulation to produce the desired innovation goals,” either due to political and revenue constraints or ideological preferences for private-sector action).

designed to spur private investment.<sup>36</sup> Even some of the IRA's direct public investments, such as the \$27 billion allocated to publicly owned "green banks," are designed to amplify private investment by offering attractive financing terms to climate projects.<sup>37</sup> While these techniques allow governments to mobilize private resources and can magnify the impact of public subsidies, they also increase the cost of legal instability. Infrastructure development requires enormous up-front capital commitments and a lengthy and risky construction process before investors can expect to see any returns.<sup>38</sup> This private precommitment of capital demands predictability above all else, so political risk can make private finance untenable.<sup>39</sup>

The costs of climate law's instability are hard to calculate, in part because these costs are realized in projects *not* built. However, fifty-state surveys of attempts to block, delay, or restrict the siting of renewable energy facilities give us a glimpse into the scale of climate opposition. The number of stalled renewable projects nationwide, and the scale of foregone climate infrastructure, is staggering. A 2023 study identified 293 renewable energy facilities as "contested," either by government policy or organized local opposition.<sup>40</sup> While U.S.-focused discussions of renewable energy finance often refer to this uncertainty in veiled terms,<sup>41</sup> U.N.-sponsored studies of so-

---

<sup>36</sup> See generally *Understanding the Inflation Reduction Act*, *supra* note 9 (summarizing the IRA's climate spending provisions).

<sup>37</sup> See Amrith Ramkumar, *Inflation Reduction Act's \$27 Billion in Green Funds Could Spur Private Investment*, WALL ST. J. (Aug. 9, 2022, 1:52 PM), <https://www.wsj.com/articles/inflation-reduction-acts-27-billion-in-green-funds-could-be-boon-for-private-sector-11660055699> [<https://perma.cc/VZ3D-Z2LL>].

<sup>38</sup> This explanation simplifies the renewable finance landscape somewhat by ignoring leverage, refinancing, and other financial structures that allow initial investors to realize returns at earlier stages.

<sup>39</sup> This characteristic of infrastructure investment has been the subject of legal study since the earliest days of private development finance. See David E. Allen & Mary E. Hiscock, *Security for Development Finance—an Autopsy*, 48 RABEL J. COMP. & INT'L PRIV. L. 4, 737 (1984) (noting that "security in development financing always involves the elimination or minimization of commercial and political risks"); see also WORKING GRP. ON INFRASTRUCTURE FIN., STERN SCH. OF BUS., THE INFRASTRUCTURE FINANCE CHALLENGE 61 (Ingo Walter ed. 2016) (noting that, for creditors to infrastructure projects, "the primary goal is to ensure a stable source of cash flow to service the outstanding debt whilst safeguarding their standing in the cash-flow 'waterfall' and collateral rights within the project's overall capital structure").

<sup>40</sup> AIDUN ET AL., *supra* note 19. Contestation, as defined by the authors, includes both organized political opposition and local legislation designed to block renewable energy development, "includ[ing] temporary moratoria on wind or solar energy development; outright bans on wind or solar energy development; regulations that are so restrictive that they can act as de facto bans on wind or solar energy development; and zoning amendments that are designed to block a specific proposed project." *Id.* at 1–2.

<sup>41</sup> For example, a 2018 report by the National Renewable Energy Laboratory on wind energy finance fails to use the term "political risk" or acknowledge local political uncertainty in the United States as a financing risk. See PAUL SCHWABE ET AL., NAT'L RENEWABLE ENERGY LAB'Y, WIND ENERGY FINANCE IN THE UNITED STATES: CURRENT PRACTICE AND OPPORTUNITIES (2018), <https://www.nrel.gov/docs/fy17osti/68227.pdf> [<https://perma.cc/ZD95-H7EG>]. While the uncertainty

called “developing countries” bluntly state that widespread political risk can significantly increase private financing costs.<sup>42</sup>

The costs of erratic climate governance can be enormous even if proposed policy changes are never actually implemented. In 2011, Wisconsin Governor Scott Walker, an opponent of wind energy, attempted to hobble wind farm development by suspending wind farm siting rules promulgated by the state’s Public Service Commission.<sup>43</sup> A month after Governor Walker reopened the wind farm siting rules, Invenergy LLC, a Chicago-based wind developer, canceled its plans to build a 150-megawatt wind farm in Brown County, Wisconsin.<sup>44</sup> In an official statement to Wisconsin’s Public Service Commission, Invenergy explained that Wisconsin’s legal regime was simply too unstable for Invenergy to make the capital commitments necessary to construct a wind farm:

Due to the advanced nature of development of the [canceled project] and the consequent extensive financial commitments, the absence of regulatory stability [in Wisconsin] has made it imprudent for Invenergy to proceed with investments in a project which unknown regulations might make infeasible to construct.<sup>45</sup>

The siting rules ultimately went into effect despite Walker’s opposition, but the uncertainty resulting from his administrative maneuvering forced at least three wind developers to suspend or cancel energy projects in Wisconsin.<sup>46</sup>

These anecdotes align with longstanding governance theory. Legal uncertainty can cause *ex ante* underinvestment, because when private investors foresee an adverse change to a legal regime, they plan accordingly.<sup>47</sup> Private anticipation can serve to magnify the effects of public

caused by political volatility is vaguely encompassed by “project development risk” and “regulatory risk,” none of the examples offered in the paper explicitly acknowledge that local opposition can create project risk for renewable energy facilities. *See id.* at 3–4.

<sup>42</sup> *See* OLIVER WAISSBEIN ET AL., UNITED NATIONS DEV. PROGRAMME, DERISKING RENEWABLE ENERGY INVESTMENT 51 (Ton Koster ed. 2013) (highlighting “political risk” as a nation-level barrier to “renewable energy deployment in developing countries”); *see also id.* at 90, 98, 106, 114 (quantifying the impact of “political risk” on renewable energy financing costs in South Africa, Panama, Mongolia, and Kenya, respectively).

<sup>43</sup> Alexandra B. Klass, *Tax Benefits, Property Rights, and Mandates: Considering the Future of Government Support for Renewable Energy*, 20 J. ENV’T & SUSTAINABILITY L. 19, 53 (2013).

<sup>44</sup> Thomas Content, *Regulatory Flux Blamed for Canceled Wind Farm*, MILWAUKEE J. SENTINEL (Mar. 22, 2011), <https://archive.jsonline.com/business/118475704.html/> [<https://perma.cc/SBZ6-LZUE>].

<sup>45</sup> Letter from Kevin E. Parzyck, Dir. of Dev., Invenergy LLC, to Sandra J. Paske, Sec’y, Wisconsin Pub. Serv. Comm’n (March 21, 2011), <https://www.windaction.org/posts/30366> [<https://perma.cc/6YJA-6R4A>].

<sup>46</sup> Klass, *supra* note 43, at 53–54.

<sup>47</sup> *See generally* Louis Kaplow, *Transition Policy: A Conceptual Framework*, 13 J. CONTEMP. LEGAL ISSUES 161 (2003) (discussing the effect of legal transitions on private sector actors).

policy changes, whether good or bad.<sup>48</sup> However, when legal changes “occur[] merely because there is a change in the political power structure,” the result is a “destructive transition.”<sup>49</sup> In a destructive transition, uncertainty precipitated by a volatile legal regime can cause the value of private investments to plummet in ways that are not easily reversed by a restoration to the previous regime.<sup>50</sup> Anticipated instability can cripple climate infrastructure investment regardless of whether a destructive transition materializes into concrete policy changes.<sup>51</sup> “The simple existence of political conflict that may result in regulatory action can create fatal uncertainty for a [renewable energy] project,” and the careful navigation of this risk often causes preconstruction project development to stretch for years if not decades.<sup>52</sup>

## II. THE ETHICS OF CLIMATE ENTRENCHMENT

While the costs of legal instability are clear, creating legal stability is more easily said than done. Climate law’s instability presents a clear question: should policymakers work to entrench climate policy against political sabotage, and if so, in what way?<sup>53</sup>

Entrenchment presents both ethical and practical concerns. It is a core principle of democratic governance that policies may be changed by election; electorates are not permanently bound by the choices of their predecessors, and legislatures cannot pass “unrepealable legislation.”<sup>54</sup> This feature of

---

<sup>48</sup> *Id.* at 172.

<sup>49</sup> Kyle D. Logue, *Legal Transitions, Rational Expectations, and Legal Progress*, 13 J. CONTEMP. LEGAL ISSUES 211, 214, 214 n.4 (2003).

<sup>50</sup> *See id.* at 214, 214 n.4, 236–39.

<sup>51</sup> Melissa Powers, *Zero-Sum Climate and Energy Politics Under the Trump Administration*, 49 ENV’T L. REP. 10870, 10873–74 (2019) (noting that “regulatory uncertainty” surrounding the Trump administration’s proposed environmental policy changes delayed state and utility decarbonization strategies).

<sup>52</sup> Lockman, *supra* note 29, at 47–48.

<sup>53</sup> The legal literature refers to the process of stabilizing a particular set of governance rules to prevent policy change as “entrenchment.” However, “entrenchment” is used in expansive and frustratingly vague ways; legal scholars have applied the term “entrenchment” to describe everything from antidemocratic subversion of elections to rules requiring politics to honor their own contracts. *See* Eric A. Posner & Adrian Vermeule, *Legislative Entrenchment: A Reappraisal*, 111 YALE L.J. 1665, 1666–67 (2002). As used in this Essay, “entrenchment” refers to legal structures designed to create binding ex ante commitments to climate action.

<sup>54</sup> Christopher Serkin, *Condemning the Decisions of the Past: Eminent Domain and Democratic Accountability*, 38 FORDHAM URB. L.J. 1175, 1176 (2011) [hereinafter *Eminent Domain and Democratic Accountability*]; *see also id.* at 1177 (“A genuinely democratic government must be able to respond to the will of its constituents, and that means today’s constituents, not yesterday’s.”); *United States v. Winstar Corp.*, 518 U.S. 839, 872 (1996) (citing 1 WILLIAM BLACKSTONE, COMMENTARIES \*90 (describing the “centuries-old concept that one legislature may not bind the legislative authority of its successors”).

democratic governance underscores a perennial tension of constitutional design: the need to allow genuine political change while guaranteeing at least enough legal stability that individuals can reasonably plan for the future.<sup>55</sup> From a practical perspective, stabilizing a particular policy related to a rapidly developing field—such as climate science—risks entrenching bad or ineffective policies.<sup>56</sup> Entrenchment in public–private partnerships has been criticized because the scope and duration of private infrastructure contracts can severely limit a government’s flexibility to govern.<sup>57</sup>

These concerns do not mean that entrenchment must be universally rejected. The Constitution itself condones a limited form of entrenchment—namely, contract.<sup>58</sup> In *United States v. Winstar Corp.*, the Supreme Court held that when the federal government enters into a contract that expressly relies on specific federal regulation, it assumes the risk of regulatory change.<sup>59</sup> The *Winstar* Court explicitly refused to hold that a private contractor could enjoin new regulations or claim exemption from them, but acknowledged that the availability of damages for regulatory change could potentially entrench certain policies.<sup>60</sup> However, the Court underscored that this created legal stability; entrenchment served “the Government’s own long-run interest as a reliable contracting partner in the myriad workaday transaction[s] of its agencies.”<sup>61</sup> Similarly, the deep legal protections afforded to property allow governments to make enduring policy by creating private property rights. This strategy of environmental policy entrenchment through property creation occasionally arises in the conservation context.<sup>62</sup>

---

<sup>55</sup> See Posner & Vermeule, *supra* note 53, at 1672.

<sup>56</sup> See Julie A. Roin, *Public-Private Partnerships and Termination for Convenience Clauses: Time for a Mandate*, 63 EMORY L.J. 283, 293–96 (2013). This “practical perspective” is, of course, complementary to the democratic principles—the future’s unpredictability is a very good reason to preserve flexibility for democratic governance.

<sup>57</sup> *Id.* Prominent criticisms of entrenchment have often focused on the risks of long-term economic precommitments such as public–private infrastructure partnerships. See John C. Roberts & Erwin Chemerinsky, *Entrenchment of Ordinary Legislation: A Reply to Professors Posner and Vermeule*, 91 CALIF. L. REV. 1773, 1809–13 (2003) (discussing the “dangers of entrenchment,” including the risk that entrenchment would hamper effective governance in the face of subsequent “budget fluctuations,” political changes, and “[c]hanging social and economic conditions”). Although Roberts and Chemerinsky largely discuss legislative entrenchment, they acknowledge that precommitments to physical infrastructure can also serve as a form of entrenchment. *Id.* at 1812 (noting that the economic policies of future governments may be hampered if “infrastructure projects are entrenched by the legislature when government coffers are full”).

<sup>58</sup> See U.S. CONST. art. I, § 10, cl. 1.

<sup>59</sup> 518 U.S. 839, 876, 905–06 (1996).

<sup>60</sup> *Id.* at 881–83.

<sup>61</sup> *Id.* at 883.

<sup>62</sup> Christopher Serkin, *Entrenching Environmentalism: Private Conservation Easements Over Public Land*, 77 U. CHI. L. REV. 341, 350 (2010) [hereinafter *Entrenching Environmentalism*].

More specifically, the nature of climate infrastructure assuages many of the concerns surrounding policy entrenchment. Entrenchment presents the greatest ethical risk when it “reap[s] immediate benefits while shifting the costs to the future.”<sup>63</sup> This makes intuitive sense—if the antidemocratic feature of entrenchment is that it allows one constituency to bind another, there is a clear risk that politicians will be incentivized to create immediate benefits by expropriating from the future, creating “inter-temporal externalities.”<sup>64</sup> Entrenching climate action presents a radically different proposition. As previously discussed, climate infrastructure projects generally produce diffuse, long-term benefits while creating immediate, concrete externalities.<sup>65</sup> This makes climate infrastructure a *positive* inter-temporal externality.

Similarly, the practical concerns about locking in poor or ineffective policies are less significant when it comes to climate mitigation infrastructure. While our understanding of climate change is rapidly evolving, and it may be prudent to leave space to modify holistic regulations, delaying climate action risks incredible harm.<sup>66</sup> Entrenching today’s infrastructure may be less than ideal—for example, rapid development of photovoltaic technology means that modern solar farms are significantly more efficient than those built a decade ago. However, the urgency of the climate crisis cautions against waiting for a perfect solution rather than quickly building well-understood infrastructure such as renewable generation facilities.<sup>67</sup> The magnitude and immediacy of climate change justifies a rapid legal transition, regardless of marginal efficiency.<sup>68</sup>

---

<sup>63</sup> *Eminent Domain and Democratic Accountability*, *supra* note 54, at 1178 (“Entrenchment concerns are most serious, however, when a government, by making a specific policy precommitment, can reap immediate benefits while shifting the costs to the future.”).

<sup>64</sup> *Id.*

<sup>65</sup> *See supra* notes 25–28 and accompanying text.

<sup>66</sup> Recent modeling of hazardous heat risk by the First Street Foundation shows that by mid-century, more than 25% of the United States will experience days with a heat index over 125 degrees Fahrenheit each year. MIKE AMODEO ET AL., FIRST ST. FOUND., THE 6<sup>TH</sup> NATIONAL RISK ASSESSMENT: HAZARDOUS HEAT 5 (2022), <https://report.firststreet.org/heat> [<https://perma.cc/U5E6-PFRB>]. The same projections suggest that by 2053, large swaths of Texas and Florida will, on average, see more than 100 days above 100 degrees Fahrenheit each year. *Id.* at 15.

<sup>67</sup> While climate change is already causing deaths, incremental changes in emissions can result in a range of radically different climate outcomes. One recent study published in *Nature Communications* estimates that each additional 4,434 metric tons of CO<sub>2</sub> added in 2020 will cause one excess death between 2020 and 2100—and, conversely, that each 4,434 metric tons of avoided CO<sub>2</sub> emissions will save one life between 2020 and 2100. R. Daniel Bressler, *The Mortality Cost of Carbon*, 12 NATURE COMMUN. 4467, at 1 (2021).

<sup>68</sup> *See also* Kaplow, *supra* note 47, at 173 (discussing allocative efficiency in legal transitions, and noting that the value of gradual policy transitions is substantially decreased when the reform itself is sufficiently desirable).

Finally, developers of fossil fuel infrastructure are already openly implementing project entrenchment techniques to mitigate the threat of climate activism. For example, a recent law review article by a lawyer specializing in pipeline construction “describes how pipeline projects are increasingly vulnerable to climate change politics,” and recommends techniques that pipeline owners can use to “fast-track projects to minimize the amount of time investments are exposed to such political risks.”<sup>69</sup> Given the brazen use of entrenchment tools by fossil fuel incumbents faced with legal instability and climate backlash, climate infrastructure developers should adopt entrenchment tools of their own.

### III. TECHNIQUES FOR ENTRENCHING CLIMATE LAW

The unique nature of climate infrastructure and the clear urgency of immediate climate action mitigate many of the ethical concerns surrounding entrenchment. Indeed, the immediate and escalating nature of the climate crisis make entrenching climate policy not only ethical, but imperative. This part discusses techniques to protect both climate policy and specific climate infrastructure projects from political risk caused by legal instability and sabotage.

However, the techniques proposed in this Essay are informed by the ethical and practical concerns surrounding entrenchment. I do not argue for the creation of “unrepealable laws” or legal stabilization clauses, even though those techniques have been widely deployed by western lawyers attempting to protect foreign investments in “developing countries.”<sup>70</sup> To entrench climate policies, this Essay recommends only those entrenchment tools that are widely used in and endogenous to American law. To protect climate infrastructure, this Essay proposes only contractual and legal mechanisms that are common in private-sector contracts with significant counterparty default risk.

#### A. Policy Entrenchment

Climate policy is the source of bitter partisan debates. These debates are not inherently illegitimate, and there are serious structural concerns with

---

<sup>69</sup> S. Scott Gaille, *How Political Risk Associated with Climate Change Is Impacting Pipeline Construction Agreements*, 40 ENERGY L.J. 111, 111–12 (2019) (discussing techniques used in pipeline construction to entrench pipelines in the face of climate activism).

<sup>70</sup> For a description and critique of this practice, see generally Andrea Shemberg, *Investment Agreements and Human Rights: The Effect of Stabilization Clauses* (John F. Kennedy Sch. of Gov't, Harvard Univ., Working Paper No. 42, 2008), [https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/programs/crj/files/workingpaper\\_42\\_shemberg.pdf](https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/programs/crj/files/workingpaper_42_shemberg.pdf) [<https://perma.cc/3KTA-XB29>]. See also Tarcisio Gazzini, *Beware of Freezing Clauses in International Investment Agreements*, in COLUMBIA FDI PERSPECTIVES 191 (2017).

entrenching the decisions of one legislature or policymaker against future revisions.<sup>71</sup> Still, climate law’s instability has dire consequences, undermining the ability for private actors to make investments in climate infrastructure such as renewable energy.<sup>72</sup> Two limited interventions will make significant strides towards eliminating climate law’s instability: reducing legal ambiguity and embedding climate reforms in resilient doctrines.

### *I. Strengthening Weak Legal Links*

The easiest and least controversial method for legislators to entrench climate policy is by simply clarifying ambiguous legal regimes to prevent attack by anti-climate activists. Legal clarity is particularly important in light of the current Supreme Court’s muscular application of the so-called “major questions doctrine,” which constrains the ability of federal agencies to interpret ambiguous statutes<sup>73</sup> and which the Court has already wielded “to constrain EPA’s efforts to address climate change” under EPA’s existing statutory authority.<sup>74</sup>

Ambiguous doctrines like windstream ownership that are vulnerable to litigation but not currently the target of significant anti-climate activism represent fertile ground for policy entrenchment. As previously discussed, windstream ownership rights are highly contentious and poorly defined, and some anti-wind activists have already leveraged this ambiguity in litigation.<sup>75</sup> A single adverse determination about windstream rights would be unlikely to cripple most existing wind farms because wind developers recognize wind law’s instability and go to great lengths to anticipate and negotiate around ambiguous ownership rights.<sup>76</sup> Still, reducing ambiguity by creating defined

---

<sup>71</sup> However, see Hari M. Osofsky & Jacqueline Peel, *Energy Partisanship*, 65 EMORY L.J. 695, 710–16 (2016) (discussing the irrationality of some climate opposition, and noting that often, “being right or wrong about climate change science is less important to people than the consequences of taking a position on the issue that conflicts with that of their cultural group”).

<sup>72</sup> See *supra* Section I.B.

<sup>73</sup> See Nathan Richardson, *Antideference: Covid, Climate, and the Rise of the Major Questions Canon*, 108 VA. L. REV. ONLINE 174, 177 (2022) (arguing that “the major questions canon is actively hostile to agency assertions of authority, allowing courts to reject agency interpretations in ‘major’ cases of statutes that are insufficiently unambiguous”); Marla D. Tortorice, *Nondelegation and the Major Questions Doctrine: Displacing Interpretive Power*, 67 BUFF. L. REV. 1075, 1104–05 (2019) (arguing that, as applied by the current Supreme Court, “the major questions doctrine is merely a smokescreen for policy judgments by the Court, which necessarily results in an enhancement of the Court’s own interpretive power”).

<sup>74</sup> *West Virginia v. EPA*, 142 S. Ct. 2587, 2628 (2022) (Kagan, J., dissenting).

<sup>75</sup> See, e.g., *supra* note 33 and accompanying text (describing windstream rights litigation by Patricia Muscarello, an avowed opponent of wind farms).

<sup>76</sup> See, e.g., K.K. DuVivier & Brendan T. Mooney, *Moat Mentality: Onshore and Offshore Approaches to Wind Waking*, 1 NOTRE DAME J. ON EMERGING TECHS. 1, 26 (2020) (noting that wind developers protect against competing claims to windstreams by “[tying] up significant leases around a



legal regimes would reduce these logistical costs and make new wind farms easier to build.

Formalizing ambiguous rules is perhaps the mildest form of “entrenchment” because it does little to prevent subsequent legislators from changing those rules. Formalization, however, is essential because of its entrenchment effects against nonlegislative actors. Most importantly, formalization limits the ability of individual litigants to erode implicit climate policies through litigation.

Where legal regimes are unclear, action is policy. Where windstream rights are ambiguous, for example, a polity that permits wind development without requiring the private agreement of everyone in the affected windstream expresses an implicit stance on windstream ownership: either that downwind users have no right to the wind at all,<sup>77</sup> or that wind is governed by the “rule of capture” and rights to the wind only vest when the wind is put to economic use.<sup>78</sup> However, without formalization, these implicit climate policies are highly vulnerable to differing judicial interpretations. Judges are not immune to politicized climate opposition: “courts are not a panacea to partisanship,” and “the dynamics around litigation and partisanship are complex.”<sup>79</sup> Even in the federal system with formally nonpartisan appointment, many judges reflect the philosophies of their appointing presidents, and some are far from friendly to climate litigation.<sup>80</sup> Judges have far more latitude to express their own preferences when governance rules are unclear,<sup>81</sup> and nonideological judges may come to different conclusions surrounding undefined rights such as wind-stream ownership. These dynamics create significant risk for climate infrastructure

---

development property”); Lockman, *supra* note 29, at 45–46 (discussing a \$6 million settlement that allocated wind rights between competing wind farms in California); *id.* at 57–58 (discussing techniques, including “buffer leases” and “good neighbor” payments, used by wind developers to coordinate property rights).

<sup>77</sup> See *Gestamp Wind N. Am., Inc. v. All. Coal, LLC*, No. 1787, 2021 WL 3612747, at \*5 (Md. Ct. Spec. App. Aug. 16, 2021) (upholding the denial of a nuisance claim by a wind developer against a neighboring coal mine that blocked wind turbines with a refuse pile because, under an interpretation of 19th century Maryland caselaw holding that “absent an agreement between the parties or a government regulation, a property owner has no right to prevent a neighbor from altering its property in ways that affect air and light on the plaintiff’s property”).

<sup>78</sup> *Romero v. Bernell*, 603 F. Supp. 2d 1333, 1335 (D.N.M. 2009) (finding that the owner of property downwind of a proposed wind farm and who wanted to build a wind farm himself had no vested property interest in his windstream because “[t]he right to ‘harvest’ wind energy is . . . an inchoate interest in the land which does not become ‘vested’ until reduced to ‘possession’ by employing it for a useful purpose”).

<sup>79</sup> Osofsky & Peel, *supra* note 71, at 761.

<sup>80</sup> *Id.* at 764.

<sup>81</sup> Ward Farnsworth et al., *Ambiguity About Ambiguity: An Empirical Inquiry into Legal Interpretation*, 2 J. LEGAL ANALYSIS 257, 258 (2010) (“Ambiguity . . . serves as an occasion for judges to consult their own views of policy, whether openly, quietly, or unconsciously.”).

development; a single judge addressing a routine property dispute between a wind farm and its neighbor could reshape renewable energy investment across a state.<sup>82</sup>

## 2. *Embedding Reform in Resilient Doctrines*

Alongside resolving legal ambiguities, policymakers should embed climate policies in resilient doctrines that give multiple constituencies the ability to challenge climate “backsliding.”<sup>83</sup> Climate policy is frequently enacted through tax law, which is subject to frequent and even retroactive change.<sup>84</sup> Similarly, climate-friendly zoning rules and variances are highly vulnerable to revocation or modification by subsequent governments.<sup>85</sup> The fundamental instability of these doctrines contributes to the risk that political changes can subvert climate action, allowing even a single anti-climate policymaker to threaten longstanding policy.

*Colon de Mejias v. Lamont*, a recent high-profile climate suit, demonstrates the importance of doctrinal resilience. Since 1998, Connecticut has imposed additional charges on consumer utility bills and directed the proceeds toward dedicated state accounts devoted to energy conservation and clean energy development.<sup>86</sup> These charges are currently imposed through the Public Utilities Regulation Authority (PURA)—the agency that regulates Connecticut public utilities.<sup>87</sup> In the fall of 2017, Connecticut authorized the transfer of more than \$100 million from these dedicated climate funds to Connecticut’s general fund.<sup>88</sup> A coalition of utility customers, environmental nonprofits, and climate-adaptation businesses sued to enjoin the transfers, arguing that the integration of these charges into their utility bills gave utility customers “a vested [contractual] right to

---

<sup>82</sup> See Lockman, *supra* note 29, at 44–45, 46, 54 (discussing *Romero v. Bernell*, and highlighting the policy consequences of the *Romero* court’s treatment of wind energy).

<sup>83</sup> The term “climate backsliding” is frequently used to describe policy changes that increase global emissions or reverse earlier climate change-oriented policies. See, e.g., *The Great Climate Backslide: How Governments are Regressing Worldwide*, BLOOMBERG NEWS (Feb. 14, 2022), <https://phys.org/news/2022-02-great-climate-backslide-regressing-worldwide.html> [<https://perma.cc/J6CC-CBVA>] (discussing how countries around the world are backsliding on their commitments to tackle the climate crisis).

<sup>84</sup> See Kaplow, *supra* note 47, at 170 (noting that tax codes in particular are subject to change “at a breathtaking rate”); Johnny Hutchinson, Comment, *What a Difference a Contract Makes: Protecting Taxpayers from Changes in the Tax Code*, 57 CASE W. RES. L. REV. 483, 485–87 (2007) (discussing Congress’s broad power to make broad and even retroactive changes to the tax code).

<sup>85</sup> See *Entrenching Environmentalism*, *supra* note 62, at 342.

<sup>86</sup> 963 F.3d 196, 200–01 (2d Cir. 2020).

<sup>87</sup> See CONN. GEN. STAT. § 16-245m (2023) (outlining the structure of the “Conservation and Load Management” fund); CONN. GEN. STAT. § 16-245n (2023) (outlining the structure of the “Clean Energy Fund”).

<sup>88</sup> *Colon de Mejias*, 963 F.3d at 201.

receive the energy efficiency services and clean energy investments that the charges were collected to support.”<sup>89</sup>

The Second Circuit rejected this challenge, holding that the structure of PURA’s regulation “did not contractually bind [Connecticut] to spend the money in accordance with the statutes.”<sup>90</sup> The contracts between the customers and the regulated utility did not give customers “the legal right to control the expenditure of funds collected because those expenditures are governed by statutes, which are subject to change by the Legislature.”<sup>91</sup> The Second Circuit further held that the *Colon de Mejias* plaintiffs had no property interest in the funds once they had been collected, and, therefore, had no standing to challenge Connecticut’s expenditure of those funds on other grounds.<sup>92</sup>

Lawyers often think of doctrinal entrenchment in terms of constitutional rights, which can be difficult to modify as a matter of formal institutional design.<sup>93</sup> Indeed, constitutional law is frequently used to entrench legislative policy against repeal. For example, in 1998 Florida politicians proposed, and Florida’s voters approved, an amendment to Florida’s constitution that entrenched Florida’s public campaign financing system.<sup>94</sup> This system already existed as a matter of ordinary law, but enshrining it in Florida’s constitution served to protect it from subsequent rollbacks.<sup>95</sup> Since its enactment, Florida’s public campaign finance provision has survived multiple repeal attempts,<sup>96</sup> including a 2010 constitutional ballot referendum that received majority support but failed to pass the 60% threshold required to modify Florida’s constitution.<sup>97</sup>

---

<sup>89</sup> *Id.*

<sup>90</sup> *Id.* at 203.

<sup>91</sup> *Id.* at 204.

<sup>92</sup> *Id.* at 205–06.

<sup>93</sup> See Ernest A. Young, *The Constitution Outside the Constitution*, 117 YALE L.J. 408, 449–55 (2007) (discussing the policy entrenchment role that many legal theorists assign to American constitutional law).

<sup>94</sup> See FLA. CONST. REVISION COMM., ANALYSIS OF THE REVISIONS FOR THE NOVEMBER 1998 BALLOT (1998), <http://library.law.fsu.edu/Digital-Collections/CRC/CRC-1998/tabloid.html> [<https://perma.cc/TW72-Y728>].

<sup>95</sup> Notably, Florida’s constitution specifically provides that any “[g]eneral law implementing [public election financing] shall be at least as protective of effective competition by a candidate who uses public funds as the general law in effect on January 1, 1998.” FLA. CONST. art. VI, § 7.

<sup>96</sup> See John Haughey, *Florida 1998 Public Campaign Financing Law to be in Crosshairs Again in 2020*, THE CTR. SQUARE (Dec. 4, 2019), [https://www.thecentersquare.com/florida/florida-1998-public-campaign-financing-law-to-be-in-crosshairs-again-in-2020/article\\_9e62b486-1694-11ea-b1f6-93ecc70cbb18.html](https://www.thecentersquare.com/florida/florida-1998-public-campaign-financing-law-to-be-in-crosshairs-again-in-2020/article_9e62b486-1694-11ea-b1f6-93ecc70cbb18.html) [<https://perma.cc/H2D9-MVMW>] (discussing the multiple failed attempts to revoke the 1998 public campaign financing amendment).

<sup>97</sup> *Repeal of Public Campaign Financing Requirement*, FLA. DIV. ELECTIONS, <https://dos.elections.myflorida.com/initiatives/initdetail.asp?account=10&seqnum=71> [<https://perma.cc/QJR4-UGPL>].

However, doctrinal resilience extends beyond constitutional law, and some less glamorous doctrinal areas give private citizens powerful tools to resist government backsliding.<sup>98</sup> Unlike many countries' laws, American law treats contractual obligations as a partial restraint on the discretion of subsequent legislatures.<sup>99</sup> Policymakers frequently use contract law's doctrinal durability to entrench government commitments against subsequent reversal.<sup>100</sup> Similarly, property law creates rights against the government that, while not inviolable, are incredibly durable methods of entrenching policy. Many scholars have argued that property law has a unique capacity to create stable private rights, and that this stability is key to encouraging private investment in complex improvements such as infrastructure.<sup>101</sup>

Government subsidies that operate through contracts and property law create more binding commitments than those that are implemented through more flexible doctrines. For this reason, scholars have proposed using contracts and property rights to entrench other critical policies, such as food aid and disaster relief, from political interference.<sup>102</sup> Climate policy could be entrenched in a similar way. For example, Connecticut's clean energy tariffs could have been structured like the federal Section 8 housing voucher program, which regulates landlords' relationships with subsidized tenants through public-private contracts between landlords and local public housing

---

<sup>98</sup> See Young, *supra* note 93, at 459 (arguing "that entrenchment is a multifarious phenomenon in American law . . . both formally and functionally").

<sup>99</sup> See Gillian Hadfield, *Of Sovereignty and Contract: Damages for Breach of Contract by Government*, 8 S. CAL. INTERDISC. L.J. 467, 479–481 (1999) ("As Brennan's dissent made plain, *U.S. Trust* places a substantial limit on the power of legislatures to change course when the policy of a prior legislature has been implemented in the form of contract.").

<sup>100</sup> See *Centex Corp. v. United States*, 395 F.3d 1283, 1314 (Fed. Cir. 2005) (enforcing a public-private contract's guarantee of specific tax treatment in the face of a subsequent change to the relevant tax code). See generally Hutchinson, *supra* note 84 (discussing the tension between tax law's fluidity and contract's entrenchment of tax policy).

<sup>101</sup> See, e.g., Abraham Bell & Gideon Parchomovsky, *A Theory of Property*, 90 CORNELL L. REV. 531, 553–57 (2005) (discussing the role that property's legal stability plays in increasing asset-specific investments).

<sup>102</sup> See Ann Marie Neugebauer, *Ensuring the Credibility of United States Food Aid: Proposals for Insulating the Food Security Wheat Reserve from Economic Influences*, 61 WASH. L. REV. 597, 603 (1986). While both property and contract give private citizens tools to resist climate backsliding, the differences between the two doctrines can have significant practical consequences. "Property's persistence over time means that reliance interests, once they arise, cast shadows far into the future. Contracts expire, either explicitly or implicitly. Property does not." Christopher Serkin, *What Property Does*, 75 VAND. L. REV. 891, 908 (2022). This difference suggests that climate policymakers should strategically choose between property and contractual rights depending on how durable they intend specific policies to be.

authorities.<sup>103</sup> Similarly, in 2022, the IRA could have created more durable rights by structuring its renewable energy subsidies through economically equivalent contracts that guarantee direct payments rather than through tax policy.<sup>104</sup> While the wide-scale deployment of climate subsidies through contracts would require greater administrative capacity, the economics of such policies would be the same and those contracted policies would be resilient against subsequent reversal by hostile future policymakers. At a smaller scale, local policymakers who support climate action may wish to structure climate infrastructure governance in a way that vests renewable developers with defensible property rights.<sup>105</sup>

### B. Project Entrenchment

The previous section discussed broad techniques to make legal and regulatory regimes more resistant to change. However, legal certainty is even more important in the context of specific infrastructure projects. Once built, significant infrastructure projects are self-entrenching—the scale of investment in their construction makes abandoning a completed project incredibly difficult.<sup>106</sup> During and before construction,<sup>107</sup> however,

---

<sup>103</sup> For a concise summary of the contractual structure of Section 8 subsidies, see *United States v. Baran*, No. CV-14-2639, 2015 WL 5446833, at \*1 (C.D. Cal. Aug. 28, 2015).

<sup>104</sup> This Essay focuses on legal entrenchment, and so does not address the practical politics of actually enacting such policies. However, it's worth acknowledging that this may be complex in practice; economically equivalent policies may have significantly different levels of public support depending on how they are framed. *See, e.g., Views of the Economic System and Social Safety Net*, PEW RSCH. CTR. (Dec. 17, 2019), <https://www.pewresearch.org/politics/2019/12/17/views-of-the-economic-system-and-social-safety-net/> [<https://perma.cc/2QF9-CTD2>] (finding that while only 40% of American poll respondents thought that the “government should provide more assistance to people in need,” 49% of respondents in the same survey said that “the government . . . [s]hould do more to help the needy, even if it means going deeper in debt”).

<sup>105</sup> For a case study of how one municipality created vested property rights to entrench environmental conservation efforts, see generally *Entrenching Environmentalism*, *supra* note 62.

<sup>106</sup> “Long-term government contracts, physical developments, and property conveyances in many forms can lock in policy preferences beyond a single legislative lifecycle.” *Eminent Domain and Democratic Accountability*, *supra* note 54, at 1176; *see also* Roin, *supra* note 56, at 293–96 (discussing the way expansive public–private partnerships reduce governance flexibility).

<sup>107</sup> Legal and regulatory disruption of infrastructure projects is uncommon once construction has started, but it is far from unheard of. In recent years, organized political and legal opposition to renewable energy projects has even forced developers to dismantle fully operating renewable energy facilities. *See* Donnelle Eller, *Neighbors in Eastern Iowa Fight to Bring Down Turbines—and Win*, DES MOINES REG. (Nov. 21, 2018, 11:31 AM), <https://www.desmoinesregister.com/story/money/business/2018/11/21/iowa-first-wind-developers-ordered-tear-down-turbines-land-use-lawsuit-supreme-court/1922334002/> [<https://perma.cc/59CR-HMDZ>] (describing court battles that resulted in a wind developer tearing down three wind turbines in Iowa after a legal attack on the project’s permitting); Asad Jung, *After Years of Uncertainty, Falmouth Wind Turbines to be Demolished*, CAPE COD TIMES (June 6, 2022, 9:14 AM), <https://www.capecodtimes.com/story/news/2022/06/06/wind-turbines-falmouth-demolished-after-years->

infrastructure projects are incredibly vulnerable to legal instability and political risk. Climate infrastructure projects, such as renewable energy facilities, are complex endeavors subject to multiple governance regimes, from labor law to energy regulation to national security law. Policymakers participate directly and indirectly in the development of private infrastructure in a myriad of ways. Frequently, governments directly contract for infrastructure: municipalities purchase electricity from privately owned solar farms under long-term power purchase agreements (PPAs), public utilities contract for battery capacity from private energy storage companies, and state governments hire construction companies to build climate-hardened water infrastructure. Climate sabotage from policymakers can create significant default risk in public contracts.

Even if a project does not directly contract with a government entity, infrastructure projects inevitably have a close relationship to public resources and governance: power is distributed through publicly regulated markets, machinery is shipped on public roads, and facilities are built under municipal zoning laws. When private sector resources are necessary to build a specific climate infrastructure project, the legal regime surrounding that project must be stable enough for contractors, financiers, and developers to make specific predictions about project risk and invest significant resources and effort based on those predictions. Legal uncertainty can be fatal to privately financed infrastructure projects or, at a minimum, significantly increase their cost.<sup>108</sup>

These complex interactions create many opportunities for legal and extralegal interference by policymakers. For example, a congressional committee, state treasurer, or governor opposed to renewable energy could subject renewable developers to onerous audits and hearings.<sup>109</sup> A public

---

struggle-renewable-energy/9943711002/ [https://perma.cc/TT8S-BZKR] (describing the dismantling of two city-owned wind turbines following years of legal and political disputes).

<sup>108</sup> See *infra* Section I.B (discussing the impact of legal instability on private sector investment in infrastructure).

<sup>109</sup> See Emma Newburger, *Meet the GOP Leaders in Charge of Critical House Environmental Committees*, CNBC (Feb. 15, 2023, 7:15 PM), <https://www.cnbc.com/2023/02/15/republicans-leading-house-environmental-committees-who-are-they.html> [https://perma.cc/B8GQ-Q5AU] (claiming that incoming Republican committee chairs pledged to “conduct ‘robust oversight’ of the spending being distributed [by the IRA] to advance the country’s clean energy sector”); Press Release, Greg Abbot, Governor, Governor Abbott Directs Public Utility Commission To Take Immediate Action To Improve Electric Reliability, Governor Greg Abbott (July 6, 2021), <https://gov.texas.gov/news/post/governor-abbott-directs-public-utility-commission-to-take-immediate-action-to-improve-electric-reliability> [https://perma.cc/D54J-3Q9L] (directing the Public Utility Commission of Texas in the wake of the 2021 Texas power outages to reallocate certain costs to “generation resources that cannot guarantee their own availability, such as wind or solar power”).

official who believes that wind turbines cause cancer could simply violate a public contract by refusing to issue checks with minimal explanation.<sup>110</sup>

This section outlines ways to insulate specific infrastructure projects from climate sabotage. For the purposes of categorization, it roughly groups strategies into “anti-default” and “anti-expropriation” techniques. “Anti-default” techniques address policymaker sabotage in the context of a government contract, while “anti-expropriation” techniques address extra-contractual interference writ large.<sup>111</sup> For example, if a municipality signed a PPA with an under-construction wind farm, a mayor sabotaging the project might “default” by repudiating the contract<sup>112</sup> or “expropriate” by closing a bridge to block necessary equipment.<sup>113</sup> While this behavior can present real threats to climate infrastructure, private law contains a variety of tools and strategies that can be used to entrench climate infrastructure against default or expropriation.

### 1. *Anti-Default Techniques*

Private law is replete with mechanisms for averting default risk, and attorneys have grown adept at adapting these mechanisms for infrastructure

---

<sup>110</sup> See Osofsky & Peel, *supra* note 71, at 713 (discussing the prevalence and resilience of partisan beliefs about climate change and renewable energy).

<sup>111</sup> This distinction is organizational only—many anti-climate actions might be categorized as either expropriation or default, and “expropriation” as used in this paper does not necessarily track with compensable expropriation as defined by American law. A large body of legal literature addresses the evolving contours of compensable expropriation, which falls outside the scope of this paper. In this Essay, expropriation is simply used to categorize a *type* of climate sabotage—value-destructive extra-contractual action.

<sup>112</sup> While outright repudiation of a PPA would be an extreme reaction, political disputes occasionally result in collateral legal attacks on PPAs. Between 2008 and 2014 the City of Lubbock, Texas, coordinated with three other Texas cities through a municipal power agency, West Texas Municipal Power Agency (WTMPA), to secure electricity from a new generating facility that was to be built and owned by Republic Power Partners, L.P. Following a dispute over the allocation of surplus revenue, however, Lubbock successfully sued to block the issuance of revenue bonds that would have financed the construction of Republic Power’s facility. See *Republic Power Partners v. City of Lubbock*, 424 S.W.3d 184, 187–89 (Tex. App. 2014), *abrogated by* *Wasson Ints., Ltd. v. City of Jacksonville*, 489 S.W.3d 427 (Tex. 2016) (describing the factual and procedural background of the dispute between Lubbock and Republic Power Partners).

<sup>113</sup> Anti-renewable activists and litigators have attempted to block renewable developers’ access to bridges and roads through both legal and extralegal channels. See Gini Mangieri, *Kahuku Wind Farm Building While Legal and Regulatory Challenges Loom*, KHON2 (Oct. 19, 2019, 1:11 PM), <https://www.khon2.com/always-investigating/kahuku-wind-farm-building-while-legal-and-regulatory-challenges-loom/> [<https://perma.cc/W52U-T8M7>] (describing collateral legal attacks on a Hawaiian wind farm that attempted to prevent developers from using “historic bridges” to transport turbine blades); HNN Staff, *After Another Night of Protests, Number of Arrests Linked to Wind Farm Opposition Hit 200*, HAW. NEWS NOW (Nov. 20, 2019, 7:18 AM), <https://www.hawaiinewsnow.com/2019/11/18/more-arrests-made-after-another-large-crowd-wind-farm-protesters-turns-out-kalaeloa/> [<https://perma.cc/T7Z7-7Q65>] (describing the arrest of 200 protestors in Hawaii who for weeks “sought to block the transport of equipment and parts” for the wind farm).

contracts.<sup>114</sup> Anti-default mechanisms are, of course, common to all contracts and arguably *define* the practice of contract law.<sup>115</sup> This section will focus on a handful of mechanisms common to structured limited-recourse infrastructure finance in jurisdictions with significant political risk.

The most common anti-default mechanisms take the form of financial assurances. These may require a counterparty to pay for political risk insurance, post specific collateral to secure their obligations, or receive a guarantee from a “sponsor”—often an international development organization or a higher level of government.<sup>116</sup> However, guarantees and collateral structures can add significant expense to a transaction, and the value of these tools must be considered in the specific context of each project.

Developers can also minimize policymaker sabotage through careful structuring of payment mechanisms and timing, without changing the underlying cost of the transaction. From the developer’s perspective, the most secure version of this would obviously be full prepayment—a government pays the full value of its contract up front, and receives services in exchange, along with sponsor guarantees to ensure that the developer upholds its side of the bargain. However, enormous precommitments of public capital can be barred by contracting laws, are often impractical, and can undermine, to an extent, the leverage value of public–private partnerships in the first place.<sup>117</sup> A more common technique is to regularly prefund a meaningful portion of the government’s commitments into a “debt service reserve” account that is stored with a collateral agent or otherwise placed out of reach of the government counterparty.<sup>118</sup> This serves two purposes. First, it allows developers to turn a general claim into a secured interest in specific assets. Second, and more important in the context of political risk, a debt service reserve account creates a buffer between default and nonpayment. For example, in the spring and summer of 2020 many

---

<sup>114</sup> See Practical Law Finance, *supra* note 17.

<sup>115</sup> See Robert E. Scott & George G. Triantis, *Incomplete Contracts and the Theory of Contract Design*, 56 CASE W. RES. L. REV. 187, 188–89 (2005) (discussing the role that contracts play in structuring future behavior through incentives, “ensur[ing] that the [contracted] exchange takes place in all circumstances when it produces value, but not when it is wasteful.”).

<sup>116</sup> WORKING GRP. ON INFRASTRUCTURE FIN., *supra* note 39, at 110 (noting that these types of guarantees can “bring greater technical expertise to an infrastructure project and help shield it (for better or for worse) from the whims of local politics”).

<sup>117</sup> See *Financial Structuring of Public-Private Partnership (P3) Concessions*, U.S. DEP’T TRANSP., [https://www.fhwa.dot.gov/ipd/fact\\_sheets/p3\\_toolkit\\_04\\_financialstructuring.aspx](https://www.fhwa.dot.gov/ipd/fact_sheets/p3_toolkit_04_financialstructuring.aspx) [<https://perma.cc/UMX4-U6HE>] (noting that public–private partnerships allow governments to “access private equity capital to finance projects,” in return for an “expected future revenue stream”).

<sup>118</sup> Edith Brown Weiss et al., *Infrastructure Projects in Developing Countries*, 89 PROC. ANN. MEETING (ASIL) 19, 22 (1995).



American and European infrastructure projects such as toll roads and airports dipped into their debt service reserve accounts to make up for a precipitous decline in users during the COVID-19 lockdowns.<sup>119</sup> In the context of political risk, this gives the nondefaulting parties breathing room to “try to reverse hostile government action towards a project,” either by good faith negotiation or legal action against saboteur policymakers.<sup>120</sup> While payment buffers are commonplace administrative tools even absent counterparty default risk, climate developers and policymakers can negotiate expanded buffers to ensure that political volatility does not immediately derail complex projects.

## 2. *Anti-Expropriation Techniques*

In addition to contractual techniques, climate policymakers must explore extra-contractual techniques to combat extra-contractual political risk. U.S. developers of climate change infrastructure have significant legal protections against direct expropriation of their investments. The Takings Clause of the U.S. Constitution,<sup>121</sup> and similar clauses contained in the overwhelming majority of state constitutions,<sup>122</sup> contain direct protections against state action that deprives investors of the economic use of their property.<sup>123</sup> These protections are highly valued by infrastructure investors, and nearly identical protections are often provided in the international context by treaties that restrict direct expropriation of investments.<sup>124</sup> However, these protections still leave infrastructure projects vulnerable to

---

<sup>119</sup> Angus Leslie Melville, *The Great Infra Coverage Up*, IJGLOBAL (Apr. 3, 2020, 2:53 PM), <https://www.ijglobal.com/articles/146644/the-great-infra-coverage-up> [<https://perma.cc/MGV2-P4CD>].

<sup>120</sup> Brown Weiss, *supra* note 118, at 22.

<sup>121</sup> U.S. CONST. amend. V (“[P]rivate property [shall not] be taken for public use, without just compensation.”).

<sup>122</sup> See John F. Coyle & Jason Webb Yackee, *Reviving the Treaty of Friendship: Enforcing International Investment Law in U.S. Courts*, 49 ARIZ. ST. L.J. 61, 102 (2017) (discussing the prevalence of state “Takings Clauses”).

<sup>123</sup> See *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1027–30 (1992) (discussing the contours and history of “takings” jurisprudence).

<sup>124</sup> These treaties can be controversial, and are currently the subject of vigorous international debate over whether the international investment treaty regime has been too successful at entrenching the interests of international investors against the legitimate policy preferences of host countries. See *Primer on International Investment Treaties and Investor-State Dispute Settlement*, COLUMBIA CTR. ON SUSTAINABLE INV. (Jan. 2022), <https://ccsi.columbia.edu/content/primer-international-investment-treaties-and-investor-state-dispute-settlement> [<https://perma.cc/N3KJ-7B4G>] (summarizing the structure of international investment treaties and ongoing debates about their appropriateness). While the anti-expropriation provisions of U.S. investment treaties generally parallel the protections granted by the Constitution, some treaties negotiated before 2002 “contain protections against indirect expropriation that are potentially stronger than the protections afforded by the U.S. Constitution” and may grant foreign investors in U.S. infrastructure even more rights against expropriation than U.S. residents enjoy. Coyle & Yackee, *supra* note 122, at 104.

more indirect sabotage. As previously discussed, this paper uses “expropriation” as a shorthand for “extra-contractual interference” by policymakers and politicians—a definition that overlaps with but is significantly broader than compensable expropriation under the Constitution.<sup>125</sup> Extra-contractual interference that would not constitute a traditional “taking” might include, for instance, thinly reasoned denials of permits or collateral legal attacks on such permits. While these activities might be successfully resisted through legal battles, early-stage infrastructure projects are particularly vulnerable to legal uncertainty and would likely prefer not to litigate even meritorious defenses.<sup>126</sup>

Less direct sabotage may be averted by techniques commonly applied in international investment. Political sabotage can be limited, for example, by ensuring that projects are planned in collaboration with influential local partners, who may reduce the likelihood of local backlash against an infrastructure project.<sup>127</sup> Similarly, multijurisdictional collaboration can insulate projects from political volatility in any one jurisdiction. For example, the private renewable energy developer American Electric Power faced political opposition to “Wind Catcher,” its 2,000-megawatt wind farm.<sup>128</sup> The facility, which was initially planned to serve four states, required approval from regulatory authorities in Arkansas, Louisiana, Oklahoma, and Texas.<sup>129</sup> In 2018, the project was temporarily canceled after the Texas Public Utility Commission denied Wind Catcher necessary approvals.<sup>130</sup> However, negotiation with the Arkansas Public Service Commission allowed a streamlined 1,485-megawatt wind farm to proceed when Arkansas agreed to accept an increased portion of the project’s energy.<sup>131</sup> In addition to offering opportunities to salvage a project by diversifying customers, the involvement of multiple political actors and organizations “may give lenders and investors

---

<sup>125</sup> See *supra* note 111 and accompanying text.

<sup>126</sup> See *supra* notes 38–39 and accompanying text.

<sup>127</sup> Ian Bremmer, *Managing Risk in an Unstable World*, HARV. BUS. REV. (June 2005), <https://hbr.org/2005/06/managing-risk-in-an-unstable-world> [<https://perma.cc/5YUD-T58K>] (noting that recruiting knowledgeable local partners can significantly reduce political risk); Eisenberg, *supra* note 25, at 109–10 (discussing the impact of community involvement on political opposition to renewable energy projects).

<sup>128</sup> Dan Gearino, *AEP Cancels Nations’s Largest Wind Farm: 3 Challenges Wind Catcher Faced*, INSIDE CLIMATE NEWS (July 30, 2018), <https://insideclimatenews.org/news/30072018/aep-cancels-wind-catcher-largest-wind-farm-oklahoma-oil-gas-opposition-clean-power-plan/> [<https://perma.cc/U9H5-U754>].

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup> Jeff St. John, *American Electric Power’s 1.5GW Wind Project Set to Sail Ahead*, GREENTECH MEDIA (May 28, 2020), <https://www.greentechmedia.com/articles/read/north-central-wind-project-is-set-to-sail-ahead> [<https://perma.cc/Z7KB-GJ2B>].

sufficient implied leverage to constrain adverse political moves” by increasing the political cost of interference.<sup>132</sup>

Additionally, climate activists should explore direct litigation against egregious climate sabotage by policymakers and anti-climate activists under theories of tortious interference. Although the federal government itself retains sovereign immunity against tortious interference claims,<sup>133</sup> some states recognize tortious interference claims against governmental subdivisions such as counties and municipalities.<sup>134</sup> While officials acting within the scope of their duties are generally immune from direct suit,<sup>135</sup> policymakers may still be liable in their individual capacities for “willful or malicious torts” or “conduct beyond the scope of [their] lawful authority.”<sup>136</sup>

Similar tortious interference claims have recently been used against environmental activists protesting infrastructure projects. In *Hurchalla v. Lake Point Phase 1, LLC*, a Florida District Court of Appeal upheld a \$4.4 million jury verdict against Maggy Hurchalla, a former county commissioner and environmental activist who had encouraged sitting county commissioners to “thwart, or at least significantly delay,” a public–private partnership between Martin County, Florida and a mining company.<sup>137</sup> “Convinced that the mining and the treatment plant would harm the delicate eco-system in the area, Maggy Hurchalla sent a series of emails to county commissioners that outlined her concerns and objections.”<sup>138</sup> “The appellate court’s decision turned largely on one specific email . . . Hurchalla had sent to certain local government officials,” which purportedly showed “evidence of malice” by falsely claiming that the mining company had not documented the benefits of the proposed partnership.<sup>139</sup> While subsequent scholars have argued that the *Hurchalla* court undervalued Hurchalla’s legitimate First Amendment right to petition her representatives,<sup>140</sup> the widespread

---

<sup>132</sup> WORKING GRP. ON INFRASTRUCTURE FIN., *supra* note 39, at 62; *see also* Peter Howard & Michael A. Livermore, *Sociopolitical Feedbacks and Climate Change*, 43 HARV. ENV’T L. REV. 119, 171–72 (2019) (discussing the role that cooperative federalism arrangements play in stabilizing environmental policy commitments).

<sup>133</sup> *See* 28 U.S.C. § 2680(h) (excluding “interference with contract rights” from the Federal Tort Claims Act’s waiver of sovereign immunity); *Sottile v. United States*, 608 F. Supp. 1040, 1042 (D.D.C. 1985) (discussing sovereign immunity in the context of tortious interference claims).

<sup>134</sup> *See* *Iowa Coal Mining Co. v. Monroe Cnty.*, 555 N.W.2d 418, 437 (Iowa 1996).

<sup>135</sup> *Tenney v. Brandhove*, 341 U.S. 367, 376 (1951).

<sup>136</sup> 4 SARA C. BRONIN & DWIGHT H. MERRIAM, RATHKOPF’S THE LAW OF ZONING AND PLANNING § 66:16 (4th ed. 2023).

<sup>137</sup> 278 So. 3d 58, 62–63 (Fla. Dist. Ct. App. 2019).

<sup>138</sup> Sarah L. Swan, *Running Interference: Local Government, Tortious Interference with Contractual Relations, and the Constitutional Right to Petition*, 36 J. LAND USE & ENV’T L. 57, 74–75 (2020).

<sup>139</sup> *Id.* at 75–76.

<sup>140</sup> *See id. passim.*

misinformation associated with anti-renewable campaigns<sup>141</sup> and dark-money financing of anti-climate protestors by the oil industry<sup>142</sup> may make it easier to identify legitimate malice in anti-climate action. A policy of aggressive litigation against climate saboteurs might discourage the most extreme and extralegal climate sabotage.

## CONCLUSION

American climate law is unstable, and some American polities and policymakers create real expropriation or sabotage risks for climate infrastructure projects. It is an uncomfortable idea, and one that speaks to larger crises within the American legal system. However, it is a solvable problem, if addressed directly. In the face of this instability, this Essay proposes a series of policy responses to shelter necessary climate infrastructure from political interference. The entrenchment techniques set forth in this Essay are neither radical or disproportionate—they are an initial, conservative response to the trend of anti-climate backlash and represent entrenchment practices that are commonly accepted in American law. Nor are they exhaustive—a myriad of additional anti-sabotage strategies exist, and the ethical and normative limits on their use may change as the climate crisis escalates.

Climate entrenchment is necessary. Climate change is an immediate challenge for American law. It reflects an escalating crisis defined, not by legal norms or structures, but by the cold equations of uncompromising physics, and any legal barriers to climate action must be taken seriously. By examining and deploying entrenchment tools, we have the opportunity to both minimize political risk and discourage political interference before it happens. Climate activists, private sector actors, and policymakers at every level of government must act to entrench climate action against legal instability.

---

<sup>141</sup> Julia Simon, *Misinformation is Derailing Renewable Energy Projects Across the United States*, NPR (Mar. 28, 2022, 5:00 AM), <https://www.npr.org/2022/03/28/1086790531/renewable-energy-projects-wind-energy-solar-energy-climate-change-misinformation> [<https://perma.cc/R2LM-6KWF>].

<sup>142</sup> See Greg Alvarez, *Fossil-Fuel Funded Opposition Is Blocking America's Clean Energy Transition. Permitting Reform Can Help.*, FORBES (Nov. 30, 2022, 10:15 AM), <https://www.forbes.com/sites/energyinnovation/2022/11/30/fossil-fuel-funded-opposition-is-blocking-americas-clean-energy-transition-permitting-reform-can-help/?sh=33d2ecf92423> [<https://perma.cc/F538-F3D3>].