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Recommended Citation

Hari M. Osofsky and Jacqueline Peel, *Energy Partisanship*, 65 EMORY L.J. 695 (2016), available at https://scholarship.law.umn.edu/faculty_articles/478.

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ENERGY PARTISANSHIP

*Hari M. Osofsky**

*Jacqueline Peel***

Whether the topic is the Paris Agreement on climate change, greenhouse gas emissions from power plants, the Keystone XL pipeline, hydraulic fracturing, offshore drilling, or renewable energy, much of the U.S. policy dialogue about energy and climate change is deeply partisan. Republicans and Democrats debate individual issues in vitriolic sound bites that indicate minimal common ground. For example, officials favoring robust action on climate change are charged with engaging in a “War on Coal.” Those opposed are labeled “members of the Flat Earth Society.” Set against these dysfunctional climate and energy politics, how can progress be made? For people who accept the science of climate change, this has become a critical question. An emerging body of psychological research indicates that strategies attempting to persuade those with opposing views with additional scientific evidence have limited effectiveness. Providing more information does not change minds because (1) it does not take moral and cultural worldview differences into account, or (2) it is presented in ways that do not adequately acknowledge how people’s perceptions of the relatability and trustworthiness of communicators shape their acceptance of that information.

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This Article provides a novel analysis of how to make progress on energy and climate change issues by translating this emerging psychological research into a framework for action. It proposes two interconnected strategies—substantive and structural—for moving past imbedded partisanship and political dysfunction. Substantively, the Article argues for refocusing regulatory efforts on areas where a greater degree of consensus may be possible, such as economic development and disaster resilience. Structurally, it proposes a shift to arenas that are less gridlocked by energy partisanship than the legislative branch of the federal government, such as other branches of the federal government, state and local levels, and corporate and private sector actors. By drawing on case studies and empirical data, including interviews with key stakeholders, the Article illustrates possibilities for progress under this framework.

INTRODUCTION

In January 2015, during the lengthy debate over the Keystone XL pipeline legislation that President Obama had promised to and ultimately did veto, the U.S. Senate passed a “landmark” resolution¹: the Senators agreed, with only one “no” vote, that “climate change is real and is not a hoax.”² However, Republican senators then proceeded to block two other measures linking climate change to human activity.³ Senator James Inhofe (R–Okla.) explained his contrasting votes by stating that “[c]limate is changing, . . . has always changed, and always will. . . . The hoax is that there are some people that are so arrogant to think that they are so powerful that they can change climate. Man can’t change climate.”⁴

¹ The Keystone XL pipeline is a proposed 1,179 mile oil pipeline project that would run from Alberta Canada to Nebraska. See *Keystone XL Pipeline: About the Project*, TRANSCANADA, <http://keystone-xl.com/about/the-keystone-xl-oil-pipeline-project/> (last visited Oct. 7, 2015). There has been a substantial partisan divide in congressional support for this project. See *Keystone XL Pipeline Divides Democrats*, PEW RES. CTR. (Mar. 19, 2014), <http://www.people-press.org/2014/03/19/keystone-xl-pipeline-divides-democrats/>; *Republicans Seek Keystone Approval; Foes Vow to Risk Arrest*, REUTERS (Feb. 12, 2014, 5:40 AM), <http://www.reuters.com/article/us-usa-keystone-idUSBREA1A23S20140212>. For a discussion of the Senate’s failure to override President Obama’s veto, see Coral Davenport, *Senate Fails to Override Obama’s Keystone Pipeline Veto*, N.Y. TIMES (Mar. 4, 2015), <http://www.nytimes.com/2015/03/05/us/senate-fails-to-override-obamas-keystone-pipeline-veto.html>.

² Jeffrey Kluger, *The Senate Discovers Climate Change!*, TIME (Jan. 23, 2015), <http://time.com/3680447/senate-climate-change/>; Frank Thorp & Carrie Dann, *Senate Votes 98-1 that ‘Climate Change Is Not a Hoax.’* NBC NEWS (Jan. 21, 2015, 6:39 PM), <http://www.nbcnews.com/politics/congress/senate-votes-98-1-climate-change-not-hoax-n290831>.

³ Thorp & Dann, *supra* note 2.

⁴ *Id.*

Apparently to prove his point, a few weeks later Senator Inhofe tossed a large snowball on the Senate floor: “You know what this is? It’s a snowball . . . just from outside here so it’s very, very cold out. Very unseasonal. So, Mr. President, catch this.”⁵ Media reaction was divided. Fox News provided a platform for Senator Inhofe to discuss his “snowballing” of President Obama, while other media outlets labeled it an “embarrassment” for the nation and the Republican Party.⁶ Jon Stewart lampooned the incident on the *Daily Show* in a segment headlined *Grumpy Cold Men*.⁷ “You think global warming’s a hoax because you—in February—were able to collect *one* ball’s worth of snow?” Stewart asked. “Clearly, if global warming was a problem,” Stewart said, mocking the Senator’s voice, “I would only be able to grab lava balls.”⁸

Senator Inhofe’s snowball stunt may provide plenty of fodder for comedians, but it only underlines a far more serious problem. Whether the topic is the Paris Agreement on climate change,⁹ greenhouse gas emissions from power plants, the Keystone XL pipeline, hydraulic fracturing, offshore drilling, or renewable energy, much of the U.S. policy dialogue about energy and climate change is deeply partisan.¹⁰ Republicans and Democrats debate

⁵ Arlette Saenz, *Sen. Jim Inhofe Throws Snowball on Senate Floor in Attempt to Debunk Climate Change*, ABC NEWS (Feb. 26, 2015, 5:22 PM), <http://abcnews.go.com/Politics/sen-jim-ihofe-throws-snowball-senate-floor-attempt/story?id=29255635>.

⁶ *Compare Lawmaker Tosses Snowball on Floor to Disprove Global Warming*, FOX NEWS INSIDER (Feb. 28, 2015, 12:25 PM), <http://insider.foxnews.com/2015/02/28/sen-jim-ihofe-tosses-snowball-senate-floor-disprove-global-warming>, with Editorial, *Sen. Jim Inhofe Embarrasses the GOP and the U.S.*, WASH. POST (Mar. 1, 2015), http://www.washingtonpost.com/opinions/a-snowballs-chance/2015/03/01/46e9e00e-bec8-11e4-bdfa-b8e8f594e6ee_story.html.

⁷ *Grumpy Cold Men*, DAILY SHOW WITH JON STEWART (Mar. 2, 2015), <http://thedailyshow.cc.com/videos/2i8i0f/grumpy-cold-men>.

⁸ *Id.*

⁹ The Paris Agreement, adopted in December 2015 at the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), will require parties to “prepare, communicate and maintain successive nationally determined contributions” to global emissions reduction that parties intend to achieve and to “pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.” See U.N. Framework Convention on Climate Change, Adoption of the Paris Agreement Under the United Nations Framework Convention on Climate Change, Dec. 12, 2015, FCCC/CP/2015/L.9/Rev.1 [hereinafter Adoption of the Paris Agreement], <http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf> (draft decision). The “nationally determined contribution” submitted by the United States in the lead up to the Paris conference specifies that the United States intends to achieve “an economy-wide target of reducing its greenhouse gas emissions by 26-28 per cent below its 2005 level in 2025.” *United States—Intended Nationally Determined Contribution*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/focus/indc_portal/items/8766.php. However, achievement of this target is tied to successful implementation of domestic measures such as new standards for coal-fired power plants under the Clean Power Plan. See *id.*

¹⁰ For examples of partisan exchanges over support for renewable energy technologies like solar and wind power, see Dina Cappiello & Matthew Daly, *Republicans, Democrats at Odds on Energy Issues*,

individual issues in vitriolic sound bites that indicate minimal common ground.¹¹ For instance, when the Obama Administration announced its Clean Power Plan for cutting carbon pollution from the power sector in June 2014, Republicans were quick to condemn the new standards as a “war on coal.”¹² Senator Chris Murphy (D–Conn.) responded that “[t]his is not a war on coal. This is a war on ignorance and negligence.”¹³ Secretary of State John Kerry went a step further, mocking “the critics and the naysayers and the members of the flat earth society.”¹⁴

ASSOCIATED PRESS–NORC CTR. FOR PUB. AFF. RES. (June 14, 2012), <http://www.apnorc.org/news-media/Pages/News+Media/republicans-democrats-at-odds-on-energy-issues.aspx>; Juliet Eilperin & Jon Cohen, *Support for Federal Backing of Renewables Slips, Driven by GOP Skepticism*, WASH. POST (Nov. 10, 2011), https://www.washingtonpost.com/national/health-science/support-for-federal-backing-of-renewables-slips-driven-by-gop-skepticism/2011/11/10/gIQA97kX9M_story.html; David Horsey, Opinion, *Koch Brothers and Big Utilities Campaign to Unplug Solar Power, Top of the Ticket*, L.A. TIMES (Apr. 23, 2014, 5:00 AM), <http://www.latimes.com/opinion/topoftheticket/la-na-tt-koch-brothers-and-solar-power-20140422-story.html>. *But see* Grace Wyler, *A War over Solar Power Is Raging Within the GOP*, NEW REPUBLIC (Nov. 21, 2013), <http://www.newrepublic.com/article/115582/solar-power-fight-raging-gop>. On divisions over the need for environmental regulation of hydraulic fracturing (fracking) and deepwater drilling for oil and gas, see *Continued Support for Keystone XL Pipeline*, PEW RES. CTR. (Sept. 26, 2013), <http://www.people-press.org/2013/09/26/continued-support-for-keystone-xl-pipeline/> (“Nearly eight in-ten Republicans (79%)—and 90% of Republicans and Republican leaners who agree with the Tea Party—support allowing more offshore oil and gas drilling, compared with 44% of Democrats.”); Ben Geman, *Senate Republicans Take Aim at Obama’s Gas ‘Fracking’ Regulations*, HILL (Mar. 29, 2012, 1:36 PM), <http://thehill.com/policy/energy-environment/218969-senate-republicans-take-aim-at-federal-gas-fracking-rules>. Cf. David B. Spence, *Responsible Shale Gas Production: Moral Outrage vs. Cool Analysis*, 25 FORDHAM ENVTL. L. REV. 141 (2013) (exploring how to produce shale gas responsibly in a polarized environment). On the desirability of energy efficiency measures such as smart grids and smart meters, see, for example, Felicity Barringer, *New Electricity Meters Stir Fears*, N.Y. TIMES (Jan. 30, 2011), <http://www.nytimes.com/2011/01/31/science/earth/31meters.html>.

¹¹ While these issues do not always divide neatly along party lines—for example, Democrats from coal-dependent states often oppose the new power plant standards—partisan politics play an important role in the debates. See *infra* Part I.

¹² Coral Davenport, *McConnell Urges States to Help Thwart Obama’s ‘War on Coal’*, N.Y. TIMES (Mar. 19, 2015), <http://www.nytimes.com/2015/03/20/us/politics/mitch-mcconnell-urges-states-to-help-thwart-obamas-war-on-coal.html>. Republicans also made it clear at the time that they planned to introduce legislation to block the regulations. Subsequently, lawsuits were filed against the EPA regulations by a suite of coal-dependent states and mining companies. Neela Banerjee, *12 States Sue the EPA over Proposed Power Plant Regulations*, L.A. TIMES (Aug. 4, 2014, 6:46 PM), <http://www.latimes.com/business/la-fi-epa-lawsuit-20140805-story.html>. For an in-depth discussion of those legislative and litigation efforts, see *infra* Part III.B.2.

¹³ *See War on Coal? Republicans and Democrats Spar over EPA Power Plant Regulations*, TALK RADIO NEWS SERV. (July 30, 2014), <http://www.talkradionews.com/congress/2014/07/30/war-coal-republicans-democrats-spar-epa-power-plant-regulations.html>.

¹⁴ Patrick Goodenough, *Kerry Mocks Climate Skeptics: ‘Flat Earth Society’*, CNSNEWS.COM (May 19, 2014, 7:36 PM), <http://cnsnews.com/news/article/patrick-goodenough/kerry-mocks-climate-skeptics-flat-earth-society>. Secretary Kerry then went on to assert that addressing climate change “is not a matter of politics or partisanship; it’s a matter of science and stewardship.” *Id.*

Numerous polls and studies reinforce that these exchanges form part of a broader pattern: the country has become more split along partisan lines in recent years, particularly with respect to environmental protection and climate action.¹⁵ The “persistent gap” in views of Republicans and Democrats on the issue of climate change suggests that it “has joined a short list of issues like gun control or taxes that define what it means to be a Republican or Democrat.”¹⁶

These partisan disagreements constrain possibilities not only for U.S. legislative efforts¹⁷ but also for international ones. At the December 2015 climate change negotiations, for example, the groundbreaking Paris Agreement limited what clauses were binding in order to allow the United States to participate without Senate ratification; a last minute crisis erupted when one “should” turned into a “shall,” which would have crossed that line.¹⁸ In addition, as the Obama Administration joined the “high ambition coalition” pushing for an international agreement (with Secretary Kerry using the “flat earth” rhetoric again as he made that announcement),¹⁹ congressional Republicans at home worked to undermine the U.S. position through

¹⁵ See *infra* Part I.

¹⁶ Matthew C. Nisbet, *Communicating Climate Change: Why Frames Matter for Public Engagement*, ENV'T (Mar.–Apr. 2009), <http://www.environmentmagazine.org/Archives/Back%20Issues/March-April%202009/Nisbet-full.html>.

¹⁷ The early years of the Obama Administration offered the most favorable political conditions in two decades for passing climate legislation. Even so, legislation to establish a nationwide cap-and-trade program for greenhouse gas emissions was roundly defeated in Congress, and there has been no hint of equivalent climate legislation emerging from the federal legislature since. For the defeated legislation, see American Clean Energy and Security Act of 2009 (Waxman-Markey Bill), H.R. 2454, 111th Cong. (2009). Close observers of the U.S. political process note that cap and trade “are going to be fairly dirty words for a while,” Telephone Interview with Participant 9 (Dec. 3, 2012), and that “[a]lthough there’s always a little buzz about carbon tax, deficits, etc., fiscal cliff, I don’t think a carbon tax is going to be a palatable option anytime soon.” Interview with Participant 5 (Nov. 14, 2012). The 2014 midterm elections merely solidified the improbability of such legislation during the remainder of the Obama Administration’s time in office. This legislative impasse has left executive action by the Obama Administration as the primary way in which climate change is being addressed at a federal level in the United States, with regional, tribal, state, local, and private action as an important complement. See *infra* Part B.2.

¹⁸ John Vidal, *How a ‘Typo’ Nearly Derailed the Paris Climate Deal*, GUARDIAN: ENV’T BLOG (Dec. 16, 2015, 7:47 AM), <http://www.theguardian.com/environment/blog/2015/dec/16/how-a-typo-nearly-derailed-the-paris-climate-deal>.

¹⁹ Matt McGrath, *COP21: US Joins ‘High Ambition Coalition’ for Climate Deal*, BBC NEWS (Dec. 10, 2015), <http://www.bbc.com/news/science-environment-35057282>; John Kerry, U.S. Secretary of State, Remarks on COP21 and Actions Beyond Paris (Dec. 9, 2015), <http://www.state.gov/secretary/remarks/2015/12/250502.htm>.

legislative proposals and public statements; presidential candidate and Senator Ted Cruz (R–Tex.) even held a hearing questioning climate change science.²⁰

These political constraints pose a major problem if one accepts consensus climate change science on the urgent need for action.²¹ A significant gap still exists between the national commitments made in the lead up to the Paris Agreement and what it would take to limit warming to even 2 degrees Celsius, not to mention the more ambitious 1.5 degree goal that many view as critical for the most climate vulnerable.²² Moreover, an emerging body of psychological research indicates that these differences cannot be overcome simply by presenting politicians and the public with more and better scientific data; strongly divided partisan views are difficult to shift and not responsive to change in the face of expert opinion.²³

²⁰ Ben Adler, *Republicans Still Hope to Throw Wrench in the Paris Climate Deal*, NEWSWEEK (Dec. 17, 2015, 4:49 PM), <http://www.newsweek.com/republicans-still-hope-throw-wrench-paris-climate-deal-406635>.

²¹ This Article takes the position that, if one accepts consensus climate change science, now is a critical time for action on energy transition and climate change. The most recent report of the Intergovernmental Panel on Climate Change stresses the urgency of action by major energy users such as the United States to limit greenhouse gas emissions in forestalling the most serious climate change impacts. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2013: THE PHYSICAL SCIENCE BASIS: SUMMARY FOR POLICYMAKERS 3 (T.F. Stocker et al. eds., 2013), http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf; see also INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY: SUMMARY FOR POLICY MAKERS (C.B. Field et al. eds., 2014), https://ipcc-wg2.gov/AR5/images/uploads/WG2AR5_SPM_FINAL.pdf; NAT'L RES. COUNCIL, ABRUPT IMPACTS OF CLIMATE CHANGE: ANTICIPATING SURPRISES 64 (2013); RHODIUM GRP., AMERICAN CLIMATE PROSPECTUS: ECONOMIC RISKS IN THE UNITED STATES 5 (2014), https://gspp.berkeley.edu/assets/uploads/research/pdf/American_Climate_Prospectus.pdf; U.S. ENVTL. PROT. AGENCY, CLIMATE CHANGE INDICATORS IN THE UNITED STATES, 2014, at 8 (3d ed. 2014), <http://www.epa.gov/climatechange/science/indicators/download.html>; U.S. GLOBAL CHANGE RES. PROGRAM, CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT (Jerry M. Melillo et al. eds., 2014), http://s3.amazonaws.com/nca2014/high/NCA3_Highlights_HighRes.pdf.

²² Even with full implementation of current nationally determined contributions submitted by the United States and other UNFCCC parties, it will not be possible to hold global average temperature rises below the 2 degree ceiling specified in the Paris Agreement, a fact which the COP decision annexing the Agreement acknowledges. See Adoption of the Paris Agreement, *supra* note 9, art. 2, ¶ 1(a); *id.* art. 4, ¶ 17.

²³ Indeed, some of those who oppose greenhouse gas regulation of the energy industry have skeptical views of climate change undergirded by deeply held moral beliefs and cultural worldviews. Their position may prove impervious to scientific information, even as the evidence about the devastating risks and effects of climate change continues to mount. Dan Kahan, *Why We Are Poles Apart on Climate Change*, 488 NATURE 255, 255 (2012). This resistance to information that goes against existing beliefs may in fact be greater among those considered “experts” in their specialist field, e.g., political pundits, economists, specialist professors. Philip Tetlock’s study of expert political judgment, for example, showed that the accuracy of an expert’s prediction has an inverse relationship to his or her self-confidence, renown, and depth of knowledge. Moreover, Tetlock found experts were not good at learning from their mistakes and tended to dismiss information that did not fit with what they already believed. In this respect, experts applied a double standard: they were much tougher in assessing the validity of information that undercut their theories than in crediting

This Article is the first to draw from this psychological research to provide a systematic plan for advancing energy and climate change policy despite partisan divides.²⁴ The Article uses our original empirical research, including interviews we have conducted with key participants in energy and climate change policy,²⁵ and case studies to propose substantive and structural strategies for progress. Its innovative conceptual framing and new empirical work make important and timely contributions to scholarship on energy, climate change, and partisanship.

The Article argues that maximizing constructive action in this context requires approaches that either allow for bipartisan agreement (“going together” strategies) or circumvent partisan divides (“going around” strategies). As illustrated by the opening example, media and public attention often focuses on conflict and “going around” strategies. However, both social science research and case examples indicate that Republicans and Democrats actually agree on some issues critical to addressing climate change and energy

information which supported it. See PHILIP E. TETLOCK, *EXPERT POLITICAL JUDGMENT: HOW GOOD IS IT? HOW CAN WE KNOW?* (2005). Part I, *infra*, explores these issues in depth. This skepticism about science is not confined to energy and climate change debates, but mirrored in many other important policy areas, as the recent controversy over vaccination and the measles outbreak illustrates. See Carrie Dann, *By the Numbers: Republicans, Democrats and the Vaccination Debate*, NBC NEWS (Feb. 2, 2015, 1:14 PM), <http://www.nbcnews.com/politics/first-read/numbers-republicans-democrats-vaccination-debate-n298606>; Chris Mooney, *POLL: Tea Party Members Really, Really Don't Trust Scientists*, MOTHER JONES (May 20, 2014, 10:46 AM), <http://www.motherjones.com/environment/2014/05/tea-party-climate-trust-science>.

²⁴ This psychological research, such as that of the Cultural Cognition Project at Yale Law School, focuses on analyzing how people perceive risk, but it does not translate that into a framework for legal strategies. For an example of these types of papers, see *Papers*, CULTURAL COGNITION PROJECT YALE L. SCH., <http://www.culturalcognition.net/browse-papers/> (last visited Dec. 25, 2015). Similarly, while a number of law review articles mention this psychological research in the context of climate change, none of them builds on it to produce a systematic framework. For instance, as of September 14, 2015, a Westlaw search of all law review articles containing the phrase “cultural cognition” and then a search within them for “climate change” revealed 106 articles, none of which use this work to develop a systematic strategy for policy progress. Most on point is a forthcoming paper by Robert Verchick that applies cultural cognition theory to strategies to address climate change adaptation, focusing on case studies of urban adaptation, but this is much narrower in scope and does not propose a comprehensive approach to energy partisanship. Robert R.M. Verchick, *Culture, Cognition, and Climate*, 2016 U. ILL. L. REV. (forthcoming), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2516887. For a discussion of this paper in the broader context of this psychological research, see *infra* note 96 and accompanying text.

²⁵ We draw on case study and empirical research, including interviews, that we have conducted, jointly and independently, across a range of climate change and energy issues over the past decade to explore the promise of substantive and structural leverage points and ways they can be paired to maximize effectiveness. These real world examples illustrate how such strategies can be and are being used in practice. This empirical work was supported in part by a grant from the Australian Research Council to support our collaborative research on climate change litigation.

transition.²⁶ By reframing problems around areas of agreement and focusing on fora where there is less conflict, leaders and advocates often can make needed progress.²⁷ And when such agreement is not possible, “going around” action—as illustrated by the Obama Administration’s use of executive authority to regulate power plant greenhouse gas emissions—provides a crucial complement. The Article uses examples of what has worked to illustrate these strategies.

Substantively, instead of confronting political and public views that resist action, the Article suggests that those seeking regulatory change should frame issues in alternative ways that resonate with a broader range of moral beliefs and cultural values. Specifically, framing climate change and energy transition as a matter of economic development (as has been possible with respect to some energy efficiency and renewable energy projects) or disaster resilience (in the aftermath of high profile events like Superstorm Sandy) are two promising avenues for “going together.”²⁸ To be effective, though, this approach must be more than mere “spin”; it should involve a genuine effort to identify areas of common ground and shared values that can be the foundation for real and tangible action.²⁹ Moreover, in such reframing, how climate change issues are discussed, including the tone, relatability and perceived trustworthiness of communicators, affects cooperativeness significantly. The Article argues for the importance of trusted individuals, referred to in the social science literature as “vouchers,” in helping to bridge partisan gaps.³⁰

Structurally, we suggest options for pursuing action in spheres that are less polarized on climate change or where partisan blocks are less substantial than is often the case in the federal congressional setting. Structural shifts may involve (1) scaling down actions to the local or state government level; (2) shifting across to another branch of government whether via litigation to force executive action or the use of executive authority to bypass congressional inaction; or (3) incentivizing private sector action to address energy issues.

Often, substantive and structural strategies interact to promote “going together,” with the suggested substantive reframing strategies offering particularly good chances of being effective at state and local levels, in other

²⁶ See *infra* Parts I & II.

²⁷ See *infra* Parts II & III.

²⁸ See Verchick, *supra* note 24.

²⁹ See *id.*

³⁰ See *id.* at 14.

branches, and with corporate and other private actors. However, unlike substantive reframing, some of these structural strategies, particularly litigation and executive action, involve “going around” partisan roadblocks.

Part I of the Article begins by exploring the partisan politics surrounding climate change and energy transition in the United States, and current interdisciplinary understandings of how they interact with possibilities for policy progress. Parts II and III build upon that research to propose substantive and structural leverage points for fostering more constructive policy dialogue and action. The Article concludes by acknowledging that despite these positive examples, the strategies proposed may not, on their own, be enough to achieve adequate policy action. However, with a fast narrowing window for avoiding the worst impacts of climate change, thinking systematically about how to overcome the barriers of partisanship is worthwhile despite potential limitations. Beyond their direct policy potential, these strategies may make an incremental difference in changing the quality of the dialogue about energy and climate change, which could contribute constructively to longer-term efforts to mount a more coordinated and comprehensive response.

I. PARTISAN POLITICS ON CLIMATE AND ENERGY



31

This Part examines how increasing partisanship and polarization of Congress and the U.S. public is inhibiting policy progress on climate and

energy issues. It pairs (1) analysis of partisanship's role in shaping energy policy with (2) a discussion of the interdisciplinary academic literature on cognitive psychology, cultural cognition, and public risk perception that helps to explain why this partisanship is apparently so intractable. A key message from this body of scholarship is that partisan divides and polarized public attitudes are rarely amenable to change simply through the presentation of reasoned argument, information, and expert knowledge.³² Instead, central to circumventing partisanship on politically controversial issues like climate change and energy transition are strategies that target areas of common ground where polarization is reduced and some form of consensus is possible.

In investigating the relationship between partisanship and energy policy in this Part, our intention is not to assert that partisanship is the only barrier to progress in this area. Biased or inaccurate media reporting of the issues, the strong ties of some regional economies to fossil fuels, and the large part that private donors and super-PACs play in electoral politics—particularly post-*Citizens United v. FEC*³³—all play a role.³⁴ Nonetheless partisanship is frequently the conduit used to give voice and effect to a range of political and public divisions over energy and other policy issues.³⁵ In other words, partisanship is a key element of climate policy dysfunction in the United States even if it is not the sole explanation.

A. “A House Divided”

Partisanship is by no means a new feature of politics in the United States. Indeed, it was in recognition of the potential “mischiefs of faction” that the

³² Indeed, and somewhat counterintuitively, studies find that exposure to more scientific “facts” about climate change that undercut a person’s strongly held anti-climate action views can serve to further harden those views. P. Sol Hart and Eric Nisbet describe this as the “boomerang effect” in which scientific information that runs counter to entrenched views produces the opposite result to that intended by amplifying partisan differences and deepening people’s existing attitudes. See P. Sol Hart & Erik C. Nisbet, *Boomerang Effects in Science Communication: How Motivated Reasoning and Identity Cues Amplify Opinion Polarization About Climate Mitigation Policies*, 39 COMM’N RES. 701, 704–05, 715 (2012). Interestingly, Hart and Nisbet find this effect is greatest where climate change campaigns focus on risks to people in other countries or even other regions of the United States. By contrast, locally focused campaigns that highlight risks to fellow residents of a state or city are less likely to activate strong partisan differences. This research reinforces the utility of a structural reframing strategy focused on local action. See *infra* Part III.A.

³³ 558 U.S. 310 (2010).

³⁴ For a discussion, for example, of political donations since *Citizens United*, see *infra* note 419 and accompanying text.

³⁵ CHRISTOPHER D. JOHNSTON, HOWARD LAVINE & CHRISTOPHER M. FEDERICO, PERSONALITY, PARTIES AND THE FOUNDATIONS OF ECONOMIC OPINION (forthcoming 2016) (manuscript at 6–7) (on file with authors) (describing partisanship as “a prime determinant and organizer of political attitudes”).

founders of this country's political system devised a series of constitutional checks and balances in order to maintain the status quo in the absence of broad bipartisan support for policy change.³⁶ However, over the last two decades, partisanship in the United States has been getting worse.³⁷

In a study released in 2012, the Pew Research Center for the People and the Press found that while the core beliefs and principles of the nation have remained relatively stable over the past twenty-five years, increasingly these beliefs are being sorted along partisan lines.³⁸ The most "pointed" area of polarization identified in the 2012 study was views on the importance of environmental protection. Whereas twenty years ago there was virtually no disagreement across party lines on this issue, by 2003, a gap of thirteen points had opened up, and by 2012, this had tripled to thirty-nine points, one of the largest value gaps recorded in the study.³⁹

³⁶ THE FEDERALIST NO. 10 (James Madison).

³⁷ Chris Cillizza, *Partisanship Doesn't Seem Worse. It Is Worse.*, WASH. POST (June 4, 2012), http://www.washingtonpost.com/blogs/the-fix/post/partisanship-doesnt-seem-worse-it-is-worse/2012/06/04/gJQAJIuzDV_blog.html. There is broad scholarly consensus that U.S. politics are more polarized than at any time in the recent past. See NOLAN MCCARTY, KEITH T. POOLE & HOWARD ROSENTHAL, *POLARIZED AMERICA: THE DANCE OF IDEOLOGY AND UNEQUAL RICHES* (2006); Nolan McCarty, *What We Know and Don't Know About Our Polarized Politics*, WASH. POST: MONKEY CAGE (Jan. 8, 2014), <http://www.washingtonpost.com/blogs/monkey-cage/wp/2014/01/08/what-we-know-and-dont-know-about-our-polarized-politics/>.

³⁸ While other social divides such as race, gender, ethnicity, class, and religion have remained much the same—neither growing nor receding significantly—partisan polarization has starkly increased. *Partisan Polarization Surges in Bush, Obama Years*, PEW RES. CTR. (June 4, 2012), <http://www.people-press.org/2012/06/04/section-1-understanding-the-partisan-divide-over-american-values/>; see also JOHNSTON ET AL., *supra* note 35 (identifying how partisanship has become strongly linked to liberal and conservative self-identification and a range of policy issues on social, cultural and racial issues). Another, more recent, large-scale survey conducted by the Pew Research Center confirms these partisan trends. The 2014 study, which surveyed over 10,000 U.S. adults, found the overall share of respondents who expressed either consistently conservative or consistently liberal opinions doubled between 1994 and 2014 from 10% to 21%. It also found that ideological thinking is more closely aligned with political partisanship than was the case in the past: "Today, 92% of Republicans are to the right of the median Democrat, and 94% of Democrats are to the left of the median Republican." *Political Polarization in the American Public*, PEW RES. CTR. (June 12, 2014), <http://www.people-press.org/2014/06/12/political-polarization-in-the-american-public/>.

³⁹ See *Partisan Polarization Surges in Bush, Obama Years*, *supra* note 38. Views on environmental regulation were identified as a key area of divergence in the 2014 study as well. In 1994, there was a relatively narrow ten-point partisan gap on this issue—a gap that had extended to thirty-five points by 2014. *Political Polarization in the American Public*, *supra* note 38.

Political scientists offer a variety of explanations for worsening partisanship in U.S. politics.⁴⁰ Some point to external factors such as increasing voter polarization, political realignment of the Southern states from largely Democrat to largely Republican, the emergence of the Tea Party faction shifting the Republican Party strongly to the right, gerrymandering through electoral redistricting, polarization of the primary elections process, increasing economic inequality, private campaign financing, and the emergence of a more partisan media.⁴¹ Others emphasize internal factors such as congressional rule changes that facilitate the addition of amendments to bills, the growing role of the speaker and majority leaders in controlling party votes, increasing levels of competition between the parties, and the breakdown of bipartisan norms.⁴² While explanations for partisanship diverge, however, broader agreement exists regarding its consequences. As Thomas Mann and Norman Ornstein put it in their 2012 book, *It's Even Worse than It Looks: How the American Constitutional System Collided with the New Politics of Extremism*, vehemently adversarial parties in the setting of a separation-of-powers government “are a formula for willful obstruction and policy irresolution.”⁴³

Studies of partisanship in the U.S. population uniformly find that polarization is greatest among political elites, such as members of Congress, who tend to hold more extreme partisan views than the public at large.⁴⁴ Even so, public views on controversial social matters appear to be influenced by the framings of issues used in the political debate. Opinion polls on climate change reveal persistent partisan divisions; more Republicans than Democrats question the validity of climate science and dismiss the urgency of the problem.⁴⁵

⁴⁰ For a good overview of the contribution of the social science in the researching causes of polarization, see Michael Barber & Nolan McCarty, *Causes and Consequences of Polarization*, in NEGOTIATING AGREEMENT IN POLITICS 19, 23, 26–32 (Jane Mansbridge & Cathie Jo Martin eds., 2013).

⁴¹ *Id.*

⁴² See Barber & McCarty, *supra* note 40, at 33–35. Jacob Hacker and Paul Pierson argue, for example, that Republican strategies have played a key role in this transition. JACOB S. HACKER & PAUL PIERSON, OFF CENTER: THE REPUBLICAN REVOLUTION AND THE EROSION OF AMERICAN DEMOCRACY (2005).

⁴³ THOMAS E. MANN & NORMAN J. ORNSTEIN, *IT'S EVEN WORSE THAN IT LOOKS: HOW THE AMERICAN CONSTITUTIONAL SYSTEM COLLIDED WITH THE NEW POLITICS OF EXTREMISM* xiii (2012).

⁴⁴ *Political Polarization in the American Public*, *supra* note 38; see also JOHNSTON ET AL., *supra* note 35 (finding cultural images of the parties have become the most salient aspects of partisan branding among politically engaged citizens).

⁴⁵ Marjorie Connelly, *Global Warming Concerns Grow*, N.Y. TIMES (Sept. 22, 2014), <http://www.nytimes.com/2014/09/23/science/global-warming-concerns-grow.html> (noting that 18% Republicans but only 3% of Democrats did not think global warming was real; further, 61% of Democrats said global warming was causing an impact now, compared with only 26% of Republicans). Although a majority of people in the United

Public support for action on climate change and clean energy in particular has waxed and waned over the last decade. It peaked in 2007; Gallup recorded its highest levels of public concern about climate change in March 2007 with 41% of those surveyed worrying “a great deal.”⁴⁶ These levels of public concern declined over the next several years, paralleling the failures of comprehensive climate legislative proposals in the Congress and weak outcomes in climate negotiations at the international level, particularly the much-publicized difficulties at the Copenhagen negotiations in 2009.⁴⁷ During 2011 and 2012, climate change and clean energy had become so politically unpalatable that the terms were barely uttered by the President. According to Richard Lazarus, it was as if “[c]limate change had become the political equivalent of Harry Potter’s Lord Voldemort: the crisis that dared not be named.”⁴⁸

When Superstorm Sandy hit the East Coast in late 2012, political and public attitudes to climate change in the United States shifted once more. Successive polls of the U.S. public since then have shown gradually increasing levels of public concern about climate change.⁴⁹ There also appears to be growing support among the U.S. public for mitigation measures to reduce carbon emissions, even if such measures would add to energy costs.⁵⁰

States view climate change as a serious problem, a November 2015 Washington Post–ABC News Poll suggests a continuing partisan split in views on the seriousness of climate change. Scott Clement, *Poll: Partisans Split on Seriousness of Climate Change*, WASH. POST (Nov. 30, 2015), https://www.washingtonpost.com/politics/poll-partisans-split-on-seriousness-of-climate-change/2015/11/29/2bf552d0-93c3-11e5-8aa0-5d0946560a97_story.html.

⁴⁶ Frank Newport, *Americans Show Low Levels of Concern on Global Warming*, GALLUP (Apr. 4, 2014), <http://www.gallup.com/poll/168236/americans-show-low-levels-concern-global-warming.aspx>

⁴⁷ For discussion of the failure of the Copenhagen UNFCCC conference of the parties to agree on a new climate agreement in 2009, see John Vidal, Allegra Stratton & Suzanne Goldenberg, *Low Targets, Goals Dropped: Copenhagen Ends in Failure*, GUARDIAN (Dec. 18, 2009, 7:47 PM), <http://www.theguardian.com/environment/2009/dec/18/copenhagen-deal>. More recent international negotiations have achieved greater success, culminating in the new, universal climate agreement adopted in Paris in December 2015. See Adoption of the Paris Agreement, *supra* note 9.

⁴⁸ Richard J. Lazarus, *Presidential Combat Against Climate Change*, 126 HARV. L. REV. FORUM 152 (2014), <http://harvardlawreview.org/2013/03/presidential-combat-against-climate-change/>.

⁴⁹ Frank Newport, *Americans’ Worries About Global Warming up Slightly*, GALLUP (Mar. 30, 2012), <http://www.gallup.com/poll/153653/americans-worries-global-warming-slightly.aspx>; Lydia Saad, *Americans’ Concerns About Global Warming on the Rise*, GALLUP (Apr. 8, 2013), <http://www.gallup.com/poll/161645/americans-concerns-global-warming-rise.aspx>; Lydia Saad, *Republican Skepticism Toward Global Warming Eases*, GALLUP (Apr. 9, 2013), <http://www.gallup.com/poll/161714/republican-skepticism-global-warming-eases.aspx>.

⁵⁰ Lisa Lerer, *Americans by 2 to 1 Would Pay More to Curb Climate Change*, BLOOMBERG BUS. (June 10, 2014); see also *Global Warming: What Should Be Done?*, N.Y. TIMES (Jan. 29, 2015) [hereinafter

Nevertheless, the political environment for making progress on climate change and energy transition remains a difficult one. In 2014, the Pew Research Center found that dealing with global warming was ranked by the public second to last in a list of twenty priorities for presidential and congressional action. In addition, substantial partisan divides were evident. Whereas 42% of Democrats cited dealing with climate change as a top priority, only 14% of Republicans and 27% of Independents shared this view.⁵¹ These splits are particularly significant because citizens showed their overall dissatisfaction with the direction of the country by shifting Congress back to Republican hands in fall 2014, intensifying the divide in federal government (as often occurs in midterm elections).

There is some recent evidence that members of the public who identify as Republican are becoming more favorably disposed to climate change action. For example, a 2015 New York Times–Stanford University–Resources for the Future (RFF) poll found that 78% of the U.S. public—including 60% of Republicans—support “the federal government limit[ing] the amount of greenhouse gases that U.S. businesses put out.”⁵² Among Republican respondents, 48% said they were more likely to vote for a candidate who supports dealing with climate change.⁵³

However, even with this shift, significant differences remain among those who identify as Democrats, Republicans, and Independents. Among Democrats, 63% said global warming was very or extremely important to them personally; only 18% of Republicans felt the same.⁵⁴ In addition, Republicans expressed more concern over the economic consequences of climate change policies, with 47% worried that measures to curb global warming would harm the economy.⁵⁵ Republicans are also more likely to vote for those who deny climate change science or do not view themselves as qualified to evaluate the

New York Times–Stanford–RFF poll], <http://www.nytimes.com/interactive/2015/01/29/us/global-warming-poll.html>.

⁵¹ *Deficit Reduction Declines as Policy Priority*, PEW RES. CTR. (Jan. 27, 2014), <http://www.people-press.org/2014/01/27/deficit-reduction-declines-as-policy-priority/>.

⁵² New York Times–Stanford–RFF poll, *supra* note 50. For a discussion of the poll, see Coral Davenport & Majorie Connelly, *Most Republicans Say They Back Climate Action, Poll Finds*, N.Y. TIMES (Jan. 30, 2015), <http://www.nytimes.com/2015/01/31/us/politics/most-americans-support-government-action-on-climate-change-poll-finds.html>.

⁵³ Davenport & Connelly, *supra* note 52.

⁵⁴ *Id.*; see also Clement, *supra* note 45.

⁵⁵ Davenport & Connelly, *supra* note 52.

science, and are less likely to support policy measures to address climate change.⁵⁶

Moreover, despite the growing concern with climate change in recent polls,⁵⁷ people in the United States continue to disassociate themselves from the problem.⁵⁸ For example, in the January 2015 New York Times–Stanford University–RFF poll, respondents still tended to view climate change as something threatening to “others,” and as having impacts that happen “away” rather than affecting them “at home.”⁵⁹ Asked how much they thought global warming had hurt them personally or would do in the future, most believed “a little” or “not at all.”⁶⁰ This disassociation against the backdrop of partisanship makes it hard to galvanize needed action.

⁵⁶ *Id.*

⁵⁷ The New York Times–Stanford–RFF poll in January 2015 may signal the emergence of higher levels of public concern on the issue. For instance, a majority of respondents in the poll thought climate change poses a critical future threat. New York Times–Stanford–RFF poll, *supra* note 50.

⁵⁸ Compared with the citizens of many other developed nations, particularly Europeans, people in the United States have tended to exhibit fairly low levels of concern about climate change as a threat and a greater ambivalence about climate change science. Irene Lorenzoni & Nick F. Pidgeon, *Public Views on Climate Change: European and USA Perspectives*, 77 CLIMATIC CHANGE 73 (2006) (providing a perspective from almost a decade ago). Gallup’s 2014 poll measuring how much the U.S. public worries about climate change compared with other environmental problems found only 34% worried “a great deal,” essentially the same number as in 1989. Newport, *supra* note 46. With respect to skepticism about climate change, in a September 2014 New York Times–CBS News poll, only 54% agreed global warming was caused by human behavior, with 31% considering warming a natural phenomenon, and 10% rejecting that global warming existed at all. Connelly, *supra* note 45. This figure of 54% agreeing that climate change is real was hailed as significant as it was the first time that polling had recorded that this belief was shared by a majority of the U.S. public. Partisan divergence was evident in levels of concern in this poll, with 18% of Republicans saying global warming was not real compared with only 3% of Democrats. About half of the Republicans surveyed considered the economy more important than the environment. *Id.*; see also A. LEISEROWITZ ET AL., CLIMATE CHANGE IN THE AMERICAN MIND: AMERICANS’ GLOBAL WARMING BELIEFS AND ATTITUDES IN NOVEMBER, 2013, at 5 (2014), <http://environment.yale.edu/climate-communication/files/Climate-Beliefs-November-2013.pdf>; Allison Kopicki, *Is Global Warming Real? Most Americans Say Yes*, N.Y. TIMES (June 1, 2014), <http://www.nytimes.com/2014/06/02/upshot/is-global-warming-real-most-in-US-believe-in-climate-change.html>; Julie Ray & Anita Pugliese, *Worldwide, Blame for Climate Change Falls on Humans*, GALLUP (Apr. 22 2011), <http://www.gallup.com/poll/147242/worldwide-blame-climate-change-falls-humans.aspx>. How the poll question is phrased can be influential; for example, people in the United States tend to see “global warming” as more of a concern (because of the association with extreme weather events) than “climate change” (which suggests more climate variability). See Allison Kopicki, *Americans More Worried About ‘Warming’ than ‘Climate Change,’* N.Y. TIMES (May 29, 2014), <http://www.nytimes.com/2014/05/30/upshot/climate-change-or-global-warming-tough-choice-for-pollsters.html>.

⁵⁹ New York Times–Stanford–RFF poll, *supra* note 50; see also Cass R. Sunstein, *On the Divergent American Reactions to Terrorism and Climate Change*, 107 COLUM. L. REV. 503, 507 (2007).

⁶⁰ New York Times–Stanford–RFF poll, *supra* note 50; see also Connelly, *supra* note 45.

B. “Can We All Get Along?”

For those who believe strongly in the necessity of a U.S. clean energy transition and robust climate change measures, it is tempting to think that the solution to partisan divisions and polarized political views lies simply in providing those opposed with better information. Within the scientific community, for example, there exists an impressive level of consensus about the reality and causes of climate change.⁶¹ Scientists’ calls for action to address anthropogenic greenhouse gas emissions are increasingly urgent and their warnings about the consequences of climate change are ever more dire.⁶² On one view then, the key to policy progress lies in getting better about how we communicate the science of climate change and the need for energy transition to politicians and the general public.⁶³ Such communication efforts have focused on increasing the amount of quality news coverage of climate science.⁶⁴ The underlying assumption of this information “deficit” model is that, once presented, the scientific facts will speak for themselves, leading the wider public to view climate change with the same urgency scientists do.⁶⁵ However, the reality—as successive opinion polls demonstrate—is that many ignore the coverage, distrust those providing the information, or reinterpret scientific claims through a partisan lens.⁶⁶

Partisan political realities also place significant limits on the capacity to achieve prescriptions for clean energy technological innovation and legal reform offered by engineers, economists, and lawyers. In an influential article published in 2004, for instance, Princeton academics Stephen Pacala and Robert Socolow proposed a “wedge” approach to “solve” the climate change problem for the next fifty years using existing technologies.⁶⁷ The authors

⁶¹ William R. L. Anderegg et al., *Expert Credibility in Climate Change*, 107 PROC. NAT’L ACAD. SCI. 12107 (2010); Peter T. Doran & Maggie Kendall Zimmerman, *Examining the Scientific Consensus on Climate Change*, 90 EOS 22, 23 (2009); Naomi Oreskes, *Beyond the Ivory Tower: The Scientific Consensus on Climate Change*, 306 SCI. 1686 (2004).

⁶² INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: SYNTHESIS REPORT (R.K. Pachauri et al. eds., 2014); *Carbon Budget Archive*, GLOBAL CARBON PROJECT (Sept. 21, 2014), <http://www.globalcarbonproject.org/carbonbudget/archive.htm> (presenting the past budgets, including the 2014 budget in particular).

⁶³ Nisbet, *supra* note 16.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ See also Hart & Nisbet, *supra* note 32.

⁶⁷ S. Pacala & R. Socolow, *Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies*, 305 SCI. 968 (2004). In 2011, Socolow published an updated version of the wedges

conceptualized the necessary emissions reductions to 2054 as a “stabilization triangle,” which could be divided up into wedges, with each wedge allocated to an existing low-carbon or renewable technology.⁶⁸ Seven years on, however, and with emissions growing largely unchecked,⁶⁹ Robert Socolow acknowledged,

Over the past seven years, I wish we had been more forthcoming with three messages: We should have conceded, prominently, that the news about climate change is unwelcome, that today’s climate science is incomplete, and that every “solution” carries risk. I don’t know for sure that such candor would have produced a less polarized public discourse. But I bet it would have.⁷⁰

Legal academics have also been guilty, at times, of ignoring or at least underestimating partisan barriers in putting forward legal “solutions” for addressing climate change. For example, law review articles and academic conferences have continued to debate the ideal form of comprehensive climate change legislation even as the political prospects for it look dim. While it is important to understand the dimensions of ideal legal frameworks for addressing climate change and energy transition, such discussions would benefit from a more explicit acknowledgement and assessment of the political possibilities.

With the growing recognition that a “data deficit” is not to blame for political inertia, scholars have increasingly explored the psychological basis for people’s reluctance—and often outright hostility—around dealing with climate change. This section explores recent psychological research that helps to explain both why the public at large does not view climate change as an urgent problem and also why views, once they become shaped along partisan lines, are very difficult to shift. Understanding the nature of these barriers to policy progress is key to framing options for moving forward despite imbedded partisanship and public ambivalence.

Polls and public opinion surveys, such as those discussed above, give important clues as to what underlies the general lack of public concern over climate change and motivates more strongly partisan views resisting policy

approach advocating nine rather than seven wedges. Robert Socolow, Opinion, *Wedges Reaffirmed*, BULL. ATOMIC SCIENTISTS (Sept. 27, 2011, 2:16 PM), <http://thebulletin.org/wedges-reaffirmed>.

⁶⁸ Pacala & Socolow, *supra* note 67.

⁶⁹ *Carbon Budget Archive*, *supra* note 62.

⁷⁰ Socolow, *supra* note 67.

change. For instance, polls of U.S. public attitudes often record that the majority of the public views climate change as a threat in the distant future, happening to others, and lower in the hierarchy of environmental concerns than other more imminent and perceptible threats.⁷¹ Harvard psychologist Dan Gilbert argues that it is these features of perceived climate change risk that make it a hard problem to get the public and politicians excited about. Gilbert's research suggests climate change does not trigger our brains' most fundamental alarm systems because it lacks four key traits that our brains have evolved to respond to as threatening.⁷² A threat has these traits if it is the result of actions that are intentional, immoral, imminent, and instantaneous.⁷³ Gilbert quipped in 2006—before the current societal shifts around gay marriage that perhaps give some hope in this context—that if climate change was *trying* to kill us, or was caused by gay sex, we would be much more likely as a society to leap into action.⁷⁴ Climate change is an extremely dangerous threat, argues Gilbert, precisely because “it fails to trip the brain’s alarm, leaving us soundly asleep in a burning bed.”⁷⁵

Other psychological research suggests that people's general inability to grasp climate change as a threat is only one of many mental barriers we face in confronting the problem.⁷⁶ For instance, environmental psychologist Robert Gifford identifies several categories of psychological barriers to mitigation behaviors that he labels “dragons of inaction.”⁷⁷ For some people a key dragon may be a lack of perceived behavioral control (what can I as an individual do that will make a difference?); for others it may be ideology or worldviews that prevent action. An effective policy response to climate change, Gifford argues, depends upon understanding which segments of the population need help in dealing with which dragons.⁷⁸

⁷¹ See *supra* Part I.A.

⁷² Daniel Gilbert, Opinion, *If Only Gay Sex Caused Global Warming*, L.A. TIMES (July 2, 2006), <http://articles.latimes.com/2006/jul/02/opinion/op-gilbert2>.

⁷³ Harvard Thinks Big 2010, *Daniel Gilbert—Global Warming and Psychology*, VIMEO (Mar. 21, 2010), <https://vimeo.com/10324258>.

⁷⁴ *Id.*

⁷⁵ Gilbert, *supra* note 72.

⁷⁶ Kharunya Paramaguru, *The Battle Over Global Warming Is All in Your Head*, TIME (Aug. 19, 2013), <http://science.time.com/2013/08/19/in-denial-about-the-climate-the-psychological-battle-over-global-warming/>.

⁷⁷ Robert Gifford, *The Dragons of Inaction: Psychological Barriers that Limit Climate Change Mitigation and Adaptation*, 66 AM. PSYCHOLOGIST 290, 298 (2011).

⁷⁸ *Id.*

Getting the general public interested in climate change and energy transition is hard enough; it is even harder to persuade partisans—on both sides—to evolve in their views in ways needed to achieve consensus, or at least compromise. Again, interdisciplinary research gives us insight into why that is the case. For example, David Hume’s well-known philosophical maxim that “[r]eason is, and ought only to be the slave of the passions”⁷⁹ is well-supported by evidence from psychology studies into the key moral precepts all humans have from birth.⁸⁰ Work by social psychologist Jonathan Haidt and others identifies five cross-culturally significant intuitions or emotions that guide our behavior and understandings of morality. These are preventing harm/caring for others; fairness/reciprocity (justice); in-group loyalty; authority/respect; and purity/sanctity.⁸¹ Haidt’s work also demonstrates that, though we share these emotions in common, people pay more or less attention to each depending upon whether they are liberal or conservative. Liberals tend to pay more attention to issues and arguments that engage the moral foundations of harm/care and fairness/reciprocity. Conservatives support these values too but also emphasize the other aspects of morality associated with loyalty, authority and purity. Both groups—conservatives and liberals—reason from their own moral perspectives and believe their conclusions are right.⁸² Adherence to a particular set of moral tenets may thus blind each group to the “truth.”

Another strand of psychological research that underscores the difficulties of attempting to change partisan views around climate change and energy transition through persuasive argument is cultural cognition theory. This conceptual approach analyzes how people view risks in an effort to explain why the public often perceives some risks as very concerning—for example, terrorism—despite the low statistical probability of their occurrence. The foundation of the theory is that an individual’s attitude to risk is shaped by the social structures in which the individual is embedded and the “cultural bias” that he or she favors.⁸³ Hence, what risks people worry about reflect their

⁷⁹ DAVID HUME, *A TREATISE OF HUMAN NATURE* 415 (L.A. Selby-Bigge ed., Clarendon Press 1896) (1739).

⁸⁰ See Joshua Knobe, *Person as Scientist, Person as Moralist*, 33 *BEHAV. & BRAIN SCI.* 315 (2010).

⁸¹ JONATHAN HAIDT, *THE RIGHTEOUS MIND: WHY GOOD PEOPLE ARE DIVIDED BY POLITICS AND RELIGION* 342 (2012).

⁸² JOHNSTON ET AL., *supra* note 35 (drawing on Haidt’s work and other literature discussing predictors of political orientations and policy preferences, which characterizes the left–right conflict as representing a clash over the potential risks associated with change).

⁸³ MARY DOUGLAS & AARON WILDAVSKY, *RISK AND CULTURE: AN ESSAY ON THE SELECTION OF TECHNICAL AND ENVIRONMENTAL DANGERS* 8 (1982); see also JOHNSTON ET AL., *supra* note 35, at 11

particular cultural worldviews: “Whatever objective dangers exist in the world social organizations will emphasize those that reinforce the moral, political or religious order that hold the group together.”⁸⁴ These effects are not necessarily overcome with higher levels of education. Indeed, in one study of climate change attitudes, researchers found a strong correlation between respondents’ cultural worldviews and their opinions on climate change but little correspondence between these opinions and respondents’ scientific literacy and numeracy scores; in fact, those with higher scores tended to have decreased concern about climate change.⁸⁵

Cultural cognition theory also stresses the importance of “vouchers” in risk communication. Vouchers are knowledgeable and trusted members of a person’s cultural group who can help to build acceptance of a particular issue through “vouching” for information and showing how it fits with the group’s pre-existing worldview.⁸⁶ Such vouchers can play an important role in breaking through otherwise entrenched understandings of the issues to suggest novel approaches that will be acceptable to their social group.⁸⁷ As explored in depth in Part II, vouchers from the two parties play an important role in determining whether the problem is framed in a way that exacerbates partisan divides or helps people “go together.”⁸⁸

Although academics debate the validity of cultural cognition theory,⁸⁹ a growing body of empirical psychological research supports its central findings, especially for highly politicized risks like climate change.⁹⁰ A leading proponent, Dan Kahan, explains the reason we are “poles apart” on issues of climate change and energy transition is not public irrationality in the face of overwhelming scientific evidence.⁹¹ Rather, being right or wrong about climate change science is less important to people than the consequences of taking a

(remarking that “the pronounced party tribalism now prevalent in American society appears to be rooted in the salience of *cultural* conflict. These disagreements are . . . about *who we are* in a deeper moral sense”).

⁸⁴ Steve Rayner, *Cultural Theory and Risk Analysis*, in SOCIAL THEORIES OF RISK 83, 87 (Sheldon Krinsky & Dominic Golding eds., 1992).

⁸⁵ Dan M. Kahan et al., *The Polarizing Impact of Science Literacy and Numeracy on Perceived Climate Change Risks*, 2 NATURE CLIMATE CHANGE 732, 733 (2012).

⁸⁶ Dan Kahan, *Fixing the Communications Failure*, 463 NATURE 296, 297 (2010).

⁸⁷ Discussions among like-minded people, on the other hand, often tend to have the opposite effect, further hardening views towards a more extreme result. See Cass R. Sunstein, *Deliberative Trouble? Why Groups Go to Extremes*, 110 YALE L.J. 71, 75 (2000).

⁸⁸ See *infra* Part II.

⁸⁹ See, e.g., Cass R. Sunstein, *Misfearing: A Reply*, 119 HARV. L. REV. 1110, 1111 (2006).

⁹⁰ Kahan, *supra* note 86, at 296.

⁹¹ Kahan, *supra* note 23, at 255.

position on the issue that conflicts with that of their cultural group.⁹² Moreover, people acquire their scientific knowledge of climate change from sources and people they trust.⁹³ A person who identifies (strongly) as a conservative, therefore, is likely to take her cues about what to believe about climate change from like-minded members and leaders of her community, and conservative segments of the media. Kahan argues that in a situation where the science communication environment is “polluted” with “toxic partisan meanings—ones that effectively announce that ‘if you are one of us you believe this; otherwise we’ll know you are one of them,’” people will favor the risk perceptions that accord with those of their social group.⁹⁴ These risk attitudes are highly resistant to change because of the detrimental social consequences for any person of taking a stand on an issue that is at odds with their cultural group.

Robert Verchick has built on Kahan’s work to explore how an understanding of cultural cognition theory might affect strategies for addressing climate change. Using case studies in the context of adaptation—which he regards as an easier avenue than mitigation—he argues for the possibilities for multi-level networks to serve as vehicles for reframing information and building trust.⁹⁵

The role of group dynamics in shaping climate attitudes and cementing partisan differences is also a theme of recent behavioral studies examining the views of strong proponents and opponents of climate action. This research finds that U.S. climate change skeptics have some characteristics of a social movement associated with a shared social identity and competition with believers.⁹⁶ A similar “us” versus “them” attitude is also evident among climate action proponents.⁹⁷ Ana-Maria Bliuc and Craig McGarty argue that resolving differences between the conflicting skeptic and believer social movements on climate change must go beyond attempts to “persuade, educate

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ Verchick, *supra* note 24.

⁹⁶ Tom Postmes, *Climate Change and Group Dynamics*, 5 NATURE CLIMATE CHANGE 195 (2015).

⁹⁷ Ana-Maria Bliuc et al., *Public Division About Climate Change Rooted in Conflicting Socio-Political Identities*, 5 NATURE CLIMATE CHANGE 226 (2015).

or improve the public's understanding of climate science. Instead, they should incorporate strategies aimed at improving intergroup relations."⁹⁸

Overall, these different strands of psychological work on climate change highlight both the difficulties and possibilities for making progress in the current partisan environment that helps to undergird this Article's approach. Namely, we need strategies that take how people form their views into account. Efforts to decrease energy partisanship need to focus on not just *what* the messages about the benefits of climate action and energy transition are, but *who* the messengers are and *how* they deliver their messages. The next section considers how to translate this theory into strategies suited to this partisan context.

C. "Don't Let the Perfect Be the Enemy of the Good"

The research highlighted in the previous section suggests that trying to argue the case for energy transition or for addressing climate change in circumstances where those arguments do not resonate with the socio-political identity, cultural worldviews, or deeply held moral beliefs of the audience is unlikely to work. That does not mean, however, that partisanship is an insurmountable obstacle to policy progress on climate change. Rather it requires looking for areas of common ground where progress can be made. Perfect agreement may not be possible on the deep moral questions that motivate different worldviews or group identities but greater options for consensus may be found in the "shallows" through options that allow incremental steps forward.

This approach has some synergies with the theories of John Rawls on "overlapping consensus"⁹⁹ and the more practically oriented writings of Cass Sunstein on "incompletely theorized agreements" as a way of resolving legal disputes in a highly politicized context.¹⁰⁰ Both approaches recognize the difficulties of getting agreement on issues of moral principle in a pluralist society. However, they posit that agreement may still be possible about a given outcome or result based on relatively low-level or narrow explanations for it

⁹⁸ Ana-Maria Bliuc & Craig McGarty, *Overcoming the Social Barriers to Climate Consensus*, CONVERSATION (Feb. 2, 2015, 2:05 PM), <http://theconversation.com/overcoming-the-social-barriers-to-climate-consensus-36889>.

⁹⁹ JOHN RAWLS, *POLITICAL LIBERALISM* xix (expanded ed., 2005).

¹⁰⁰ Cass R. Sunstein, *Incompletely Theorized Agreements*, 108 HARV. L. REV. 1733, 1746–47 (1995).

that do not engage fundamental principles that remain in dispute.¹⁰¹ Taking this view, areas of common ground can be reached, but with different groups rationalizing this agreement in different ways that accord with their own principles or moral views. Discussion needs to shift from the differences between group positions to similarities and broader goals that both groups share.¹⁰² Often it will be necessary for proponents of climate action to shed the “science says” argument in favor of focusing on pragmatic climate policies that serve a range of ends.¹⁰³

Translating these insights to the context of overcoming energy partisanship requires thinking about two questions. First, are there things people will agree on, perhaps which engage social values that are more broadly shared? For instance, “conservatives” may find some portrayals of climate change off-putting, particularly those that call for radical lifestyle changes or which blame businesses for the problem. Nonetheless, they might agree with “liberals” on more general motivations for climate action such as saving money, creating jobs or doing things that are good for the economy; protecting homes, families, and children; or solidarity with local community. Such areas of common ground can provide a foundation for thinking about different ways of framing issues of climate change and energy transition that will resonate with a broader range of people and across party lines.¹⁰⁴

Second, are there avenues for getting things done on climate change and energy issues where polarization of views is less evident or poses less of a barrier? For example, polarization and partisanship may feature less at the local level where people have strong community ties and often do not even know the partisan affiliation of their elected officials.¹⁰⁵ Courts offer a forum in which interested citizens and groups are able to advocate for regulatory action and arguments and evidence on either side of the issue can be aired and deliberated; their rulings, as discussed in Part III.B, have formed an important

¹⁰¹ *Id.* at 1735–36; RAWLS, *supra* note 99, at xix.

¹⁰² Bliuc & McGarty, *supra* note 98.

¹⁰³ Mathis Hampel, *Want to Convince People That Climate Change Is Real? Stop Talking About the Science of It*, WASH. POST (Jan. 22, 2015, 1:54 AM), <http://www.washingtonpost.com/posteverything/wp/2015/01/22/want-to-convince-people-that-climate-change-is-real-stop-talking-about-the-science-of-it/>.

¹⁰⁴ These values are widely shared across society as a whole. The 2009 survey conducted by the Pew Research Center about the public’s priorities for government action recorded global warming in twentieth place, the economy in first place, and job creation in second place, whereas mid-ranking issues included dealing with the problems of the poor and needy, protecting the environment, and dealing with the nation’s energy problem. Nisbet, *supra* note 16, at 15.

¹⁰⁵ *See infra* Part III.A.

basis for policy action.¹⁰⁶ Partisan obstacles in Congress can also be bypassed more directly through the President's use of executive authority to forward federal and international action on climate change.¹⁰⁷ In business settings, partisan views may be less influential than the overall goal of improving corporate economic performance and shareholder returns. If climate and energy policy are gridlocked in Congress, it may be that these forums provide alternative sites where action can be taken and progress made.

In the next two Parts, we explore these strategies as interlinked substantive and structural leverage points for moving forward on climate and energy issues in a polarized political environment. We focus on reframing the dialogue when possible around issues about which people largely agree and on pairing this substantive shift with relocating policy efforts to less partisan spaces.

II. SUBSTANTIVE LEVERAGE POINTS FOR MAKING PROGRESS

Climate advocates have long recognized the benefits of a multi-pronged approach to tackling the massive problem of climate change.¹⁰⁸ Its wide-ranging and cumulative effects limit the scope for solving the problem "in one fell regulatory swoop."¹⁰⁹ While most favor national legislation and international agreement as forming the core optimal approach, this has not prevented experimentation with multiple policy options, regulatory tools, and litigation strategies in an attempt to make progress on the issue. Moreover, a "significant gap" remains between emissions reductions needed to avoid dangerous levels of warming and the national commitments made in the lead up to the Paris Agreement.¹¹⁰ Even those who used to focus on centralized

¹⁰⁶ See *infra* Part III.B.

¹⁰⁷ This is a "go-around" strategy which is often controversial and has the potential to exacerbate partisan divides, at least in the short-term. Other substantive and structural strategies offer more scope for cooperative or "go-together" approaches. See *infra* Parts II & III; see also Hari M. Osofsky & Jacqueline Peel, *The Grass Is Not Always Greener: Congressional Dysfunction, Executive Action, and Climate Change in Comparative Perspective*, 91 CHI.-KENT L. REV. 139 (forthcoming 2016) (part of symposium issue on congressional dysfunction and executive power).

¹⁰⁸ J.B. Ruhl & James Salzman, *Climate Change, Dead Zones, and Massive Problems in the Administrative State: A Guide for Whittling Away*, 98 CALIF. L. REV. 59, 66 (2010).

¹⁰⁹ *Massachusetts v. EPA*, 549 U.S. 497, 524 (2007).

¹¹⁰ See Adoption of the Paris Agreement, *supra* note 9, pmbl. 9. Accordingly, the decision recognizes that "much greater emissions reduction efforts will be required than those associated with the intended nationally determined contributions in order to hold the increase in the global average temperature to below 2 °C above pre-industrial levels." *Id.* at 2.

solutions increasingly have come to embrace a more “polycentric” approach, in which many people and actors in multiple forums are part of a solution.¹¹¹

This Part and the next focus on operationalizing polycentric strategies that concentrate on issues and contexts where partisanship serves as less of a barrier. However, in so doing, our intention here is not to “teach grandma how to suck eggs.”¹¹² We are aware that many may feel that the practical, the possible, and the realistic are what they are already doing. As one interviewee put it to us in discussing his approach to forwarding energy transition: “Even if at the end of the day we don’t change and our society just continues on this suicidal approach of burning fossil fuels, I think we have to do what we can now, with the tools we have, to try and protect the future.”¹¹³

Our sense, though, from our years of research on climate and energy issues and many discussions and interviews with colleagues, practitioners, environmental advocates, agency officials, judges, and politicians is that these strategies are often pursued opportunistically and that those in the trenches rarely have time to step back to examine the big picture across the myriad of relevant players. Moreover, a common theme that comes through, even among the most innovative advocates, is exhaustion and sometimes perplexity from their extensive on-the-ground experiments about what can work—what can make a difference—in the face of often deeply divided political views and hostile public opinion.

In this Part and the one that follows, we take that step back. We draw from our own experience and findings, and those of people on the front line who have varying perspectives, to explore areas where progress can be made. We focus first in this Part on the role of framing in communicating climate change risk and motivating policy action, along with examples of where substantive reframing of climate and energy issues—either in terms of economic

¹¹¹ See Elinor Ostrom, *A Polycentric Approach for Coping with Climate Change* 39 (World Bank, Policy Research Working Paper No. 5095, 2009), <https://openknowledge.worldbank.org/handle/10986/4287>; see also Daniel H. Cole, *From Global to Polycentric Climate Governance* (European Univ. Inst. Robert Schuman Ctr. for Advanced Studies, Working Paper No. 2011/30, 2011), <http://cadmus.eui.eu/handle/1814/17757>. The important role of non-state actors in taking climate action is also recognized by the decision of the conference of the parties adopting the Paris Agreement which contains a specific section on “non-party stakeholders.” See Adoption of the Paris Agreement, *supra* note 9, at 19.

¹¹² This saying refers to people giving advice to someone who already knows about the subject, perhaps more than the advice-giver.

¹¹³ Interview with Participant 17 (Mar. 20, 2013).

development or as a strategy for disaster resilience—has been effective in bringing people on board to tackle issues in a cooperative way.

In Part III, we turn to instances of structural reframing—essentially options for shifting climate action to other, less polarized forums. We examine examples of how state and local government, judicial and executive branch, and business settings may provide practical options for moving forward on climate and energy concerns. In many cases, the effectiveness of the two sets of strategies can be enhanced by combining them. For instance, using an economic development or disaster resilience framing to promote local government action or shift private sector behavior. These Parts thus explore these synergies as part of a systematic strategy for progress in a partisan environment.

A. “*The Question Is Not What You Look at, but What You See*”



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One of the great insights offered by social science research about public communication of risks like climate change is that frames matter.¹¹⁵ Frames are “cognitive shortcuts” that help us interpret and represent the world around us.¹¹⁶ They are like selective filters that emphasize some aspects of what is observed or heard while discounting other aspects that appear irrelevant or

¹¹⁴ Mike McKee, *Global Warming Alarmists*, CAGLE POST (Sept. 23, 2013), <http://www.cagle.com/2013/09/global-warming-alarmists>.

¹¹⁵ See Nisbet, *supra* note 16, at 14 (explaining that “[r]eframing the relevance of climate change . . . can generate the level of public engagement required for policy action”).

¹¹⁶ Sanda Kaufman, Michael Elliott & Deborah Shmueli, *Frames, Framing and Reframing*, BEYOND INTRACTABILITY, <http://www.beyondintractability.org/essay/framing> (last updated June 2013).

counterintuitive.¹¹⁷ In essence, it is not what you say but what people “hear” that is crucial in communicating information about risks.

To make sense of policy debates people often use frames provided by others (the media, policymakers, experts). However, these supplied frames are integrated with their preexisting interpretations forged through personal experience, social identity, conversations with others, partisanship, or ideology.¹¹⁸ People employing mutually incompatible frames—climate change regulation is imperative to avoid environmental catastrophe versus climate change regulation is “a war on coal”—contribute significantly to the intractability of an issue.¹¹⁹ Furthermore, people are only likely to accept an alternative way of framing “if it is relevant—or applicable—to the audience’s preexisting interpretations.”¹²⁰

In U.S. public debates over climate change and energy transition, two mutually incompatible frames have tended to dominate. The first—often employed by Republican politicians and the conservative media—has emphasized themes of scientific uncertainty, dire economic consequences associated with climate action, and the unfairness of U.S. citizens being required to take action if other countries such as China and India do not.¹²¹ The second, epitomized by Al Gore’s documentary, *An Inconvenient Truth*, represents climate change as a terrifying environmental catastrophe.¹²² Reactions to these frames have often perpetuated and exacerbated partisan divides. Dramatization of potential climate change impacts has bolstered skeptic commentators’ allegations of liberal “alarmism.”¹²³ In response, Democrats, during the George W. Bush Administration, accused the

¹¹⁷ *Id.*

¹¹⁸ Nisbet, *supra* note 16, at 17.

¹¹⁹ Kaufman et al., *supra* note 116. For an example of the “war on coal” framing, see Peter Roff, Opinion, *The War on Coal Is Just the Beginning*, U.S. NEWS (Aug. 12, 2015, 4:45 PM), <http://www.usnews.com/opinion/blogs/peter-roff/2015/08/12/the-war-on-coal-and-the-clean-power-plan-are-just-the-beginning>.

¹²⁰ Nisbet, *supra* note 16, at 17.

¹²¹ See Oliver Burkeman, *Memo Exposes Bush’s New Green Strategy*, GUARDIAN (Mar. 3, 2003, 8:48 PM), <http://www.theguardian.com/environment/2003/mar/04/usnews.climatechange> (discussing Republican strategist Frank Luntz’s memo on party strategy for dealing with the global warming issue); Ed O’Keefe et al., *GOP Congressional Leaders Denounce U.S.-China Deal on Climate Change*, WASH. POST (Nov. 12, 2014), https://www.washingtonpost.com/politics/gop-congressional-leaders-denounce-us-china-deal-on-climate-change/2014/11/12/ff2b84e0-6a8d-11e4-a31c-77759fc1eacc_story.html (providing statements from Republican leaders about costs and concerns that the United States will have greater obligations than China).

¹²² See *Global Warming: Be Worried, Be VERY Worried*, TIME, Apr. 3, 2006, at cover.

¹²³ Andrew C. Revkin, *In Climate Debate, Exaggeration Is a Pitfall*, N.Y. TIMES (Feb. 24, 2009), <http://www.nytimes.com/2009/02/25/science/earth/25hype.html>.

Administration of being climate change “deniers” conducting a “war on science.”¹²⁴

Frames can be used not only as an aid in interpreting information or events but also as a tool to strategically reach out to a broader audience, build coalitions, and shape personal behavior.¹²⁵ In an effort to break policy gridlock on climate change, various new framings of climate change and clean energy have been proposed and have enjoyed varying levels of success. Some have sought to cast safeguarding the planet from climate change as a matter of morality and ethics.¹²⁶ This frame has especially targeted evangelical Christians and their belief in the religious duty to be stewards of God’s creation.¹²⁷ It can also be a strong framing for conservatives in discussing climate change. For instance, as observed by former Navy Rear Admiral David Titley, once a “pretty hard-core climate skeptic” but later a leader of the U.S. Navy’s Climate Change Taskforce,

A lot of people who doubt climate change got co-opted by a libertarian agenda that tried to convince the public the science was uncertain—you know, the Merchants of Doubt. Unfortunately, there’s a lot of people in high places who understand the science but don’t like where the policy leads them: too much government control.

Where are the free-market, conservative ideas? The science is settled. Instead, we should have a legitimate policy debate between the center-right and the center-left on what to do about climate change. If you’re a conservative—half of America—why would you take yourself out of the debate? C’mon, don’t be stupid. Conservative people want to conserve things. Preserving the climate should be high on that list.¹²⁸

¹²⁴ See UNION OF CONCERNED SCIENTISTS, FEDERAL SCIENCE AND THE PUBLIC GOOD (2008), http://www.ucsusa.org/scientific_integrity/solutions/big_picture_solutions/federal-science-and-the.html; see also CHRIS MOONEY, THE REPUBLICAN WAR ON SCIENCE (2005).

¹²⁵ Kaufman et al., *supra* note 116.

¹²⁶ EDWARD O. WILSON, THE CREATION: AN APPEAL TO SAVE LIFE ON EARTH 8 (2006).

¹²⁷ Kate Galbraith, *Churches Go Green by Shedding Fossil Fuel Holdings*, N.Y. TIMES (Oct. 15, 2014), <http://www.nytimes.com/2014/10/16/business/international/churches-go-green-by-shedding-holdings-of-carbon-emitters.html>.

¹²⁸ Eric Holthaus, “Climate Change War” Is Not a Metaphor, SLATE (Apr. 18, 2014), http://www.slate.com/articles/technology/future_tense/2014/04/david_titley_climate_change_war_an_interview_with_the_reired_rear_admiral.html.

Another example of substantive reframing is the increasing emphasis on climate change as a public health problem.¹²⁹ For instance, EPA Administrator Gina McCarthy often describes the EPA's mission as centered on protecting public health and new climate change regulation as advancing that goal.¹³⁰ Similarly, in his book *Overheated: The Human Cost of Climate Change*, Andrew Guzman discusses the many ways that "climate change is bad for your health" in issuing a call to arms on climate and energy transition.¹³¹ This health framing may be useful in building support for adaptation measures that respond to climate change-related risks such as heat waves. However, its use in a mitigation context as part of a public relations campaign around restrictions on coal plant emissions so far appears to have had more mixed results,¹³² notwithstanding scientific evidence highlighting the potential health benefits of these regulations.¹³³

To be effective, efforts at "reframing" the issue of climate change must be more than just "spin." Instead, reaching those with varying viewpoints often requires taking on new perspectives and searching for common ground around a smaller set of issues.¹³⁴ Equally important is the manner in which information is communicated. In line with the insights from cultural cognition theory, social scientists working on climate change communication are increasingly finding that factors like whether communicators use a friendly tone, display respect for and openness to different views, and work to establish trust are key to effective communication of climate risks.¹³⁵ Or as Verchick has

¹²⁹ See, e.g., *Climate Change and Human Health*, NAT'L INST. ENVTL. HEALTH SCI., <http://www.niehs.nih.gov/research/programs/geh/climatechange/> (last visited Sept. 13, 2015); *Climate Change and Public Health*, WORLD HEALTH ORG., <http://www.who.int/globalchange/en/> (last visited Sept. 13, 2015).

¹³⁰ Cheryl K. Chumley, *EPA's Gina McCarthy: Climate Change 'Biggest Public Health Challenge We Face'*, WASH. TIMES (Apr. 22, 2014), <http://www.washingtontimes.com/news/2014/apr/22/epas-gina-mccarthy-climate-change-biggest-public-h/>.

¹³¹ ANDREW T. GUZMAN, *OVERHEATED: THE HUMAN COST OF CLIMATE CHANGE* 172–73 (2013).

¹³² See Umair Irfan, *Most Americans Fail to Link Health Impacts to Climate Change, Polls Shows*, CLIMATEWIRE (June 12, 2014), http://www.climatechangecommunication.org/sites/default/files/reports/Irfan_climatewire.pdf.

¹³³ JOEL SCHWARTZ ET AL., HARVARD SCH. OF PUB. HEALTH, *HEALTH CO-BENEFITS OF CARBON STANDARDS FOR EXISTING POWER PLANTS* (2014), <http://www.chgeharvard.org/resource/health-co-benefits-carbon-standards-existing-power-plants>.

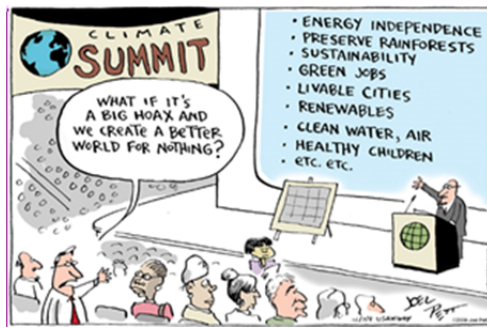
¹³⁴ Kaufman et al., *supra* note 116.

¹³⁵ Research being conducted on climate change communication at the University of Exeter in the U.K. by Thomas Morton and Hebba Haddad is particularly relevant. See Thomas Morton & Hebba Haddad, *Dynamics of Communicating Climate Change Information*, U. EXETER, <http://www.exeter.ac.uk/slt/ourresearch/communicatingclimatechange/> (last visited Sept. 17, 2015).

put it, we need to focus on both frames and “vouchers,” those who build trust in a community and so are able to vouch for the validity of information.¹³⁶

For those in the policy and legal spheres—interested in action and not just risk communication—there is also a need to match new ways of talking with practical on-the-ground strategies. In the following sections, we focus on two examples of substantive reframing around economic development and disaster resilience that, in our experience, have been particularly successful in circumventing partisan divides to move forward on climate and energy issues. Discussion of these two “going together” frames is paired with real world case examples of where their use has been effective in aiding needed policy change.

B. “It’s the Economy, Stupid”



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During then-Governor Bill Clinton’s successful 1992 presidential bid against sitting president George H.W. Bush, campaign strategist James Carville wrote the following “Rules” on a whiteboard in campaign headquarters:

1. Change vs. More of the Same
2. The Economy, Stupid
3. Don’t Forget Health Care¹³⁸

That second rule became a key campaign slogan and has since been popularized in many variations, including often the addition of “It’s.”¹³⁹

¹³⁶ Verchick, *supra* note 24, at 14–15.

¹³⁷ © Joel Pett. All rights reserved. Distributed by Cartoonist Group.

¹³⁸ Michael Kelly, *The 1992 Campaign: The Democrats—Clinton and Bush Compete to Be Champion of Change; Democrat Fights Perceptions of Bush Gain*, N.Y. TIMES (Oct. 31, 1992), <http://www.nytimes.com/1992/10/31/us/1992-campaign-democrats-clinton-bush-compete-be-champion-change-democrat-fights.html>.

Part of the popular appeal of Carville's approach was that it spoke to a key truth of U.S. politics (and politics around the world). People, regardless of partisan affiliation, care deeply about the economy and their job prospects. As mentioned above, in a survey conducted by the Pew Research Center for the People and the Press in 2014, the top two policy priorities for the President and Congress were "[s]trengthening the nation's economy" (supported by 80%) and "[i]mproving the job situation" (supported by 74%).¹⁴⁰ These priorities have altered little in the last five years. The same survey conducted in 2009 also had the economy and jobs as the two top priorities (supported by 85% and 82% respectively).¹⁴¹

Along similar lines, economists have long analyzed the extent of political business cycles, in which politicians make decisions based on short-term election results rather than the long-term interest.¹⁴² They largely agree that economic conditions influence election outcomes, with some disputes over the extent of political manipulation and the role of partisanship.¹⁴³ For the

¹³⁹ *Id.*

¹⁴⁰ *Deficit Reduction Declines as Policy*, PEW RES. CTR. (2014), <http://www.people-press.org/2014/01/27/deficit-reduction-declines-as-policy-priority/>.

¹⁴¹ *Id.*; see also Connelly, *supra* note 45 ("Economic issues continue to top the list of most important problems, and only 1 percent of those surveyed . . . offered the environment as a top concern for the country.")

¹⁴² Economist William Nordhaus defined the concept of political business cycles in his classic 1975 article, *The Political Business Cycle*:

The general conclusion was that a perfect democracy with retrospective evaluation of parties will make decisions biased against future generations. Moreover, within an incumbent's term in office there is a predictable pattern of policy, starting with relative austerity in early years and ending with the potlatch right before elections.

William D. Nordhaus, *The Political Business Cycle*, 42 REV. ECON. STUD. 169, 187 (1975).

¹⁴³ Allan Drazen provided an assessment of the political business cycle work over its first twenty-five years, reaching the conclusion that

[a]lthough there is wide (but not universal) agreement that aggregate economic conditions affect election outcomes in the United States, there is significant disagreement about whether there is opportunistic manipulation that can be observed in the macro data. There is a clear partisan effect in the United States (as well as in some other countries), with economic activity being lower in the first part of Republican than Democratic administrations, but still disagreement about the underlying driving mechanisms.

Allan Drazen, *The Political Business Cycle After 25 Years*, in 15 NBER MACROECONOMICS ANNUAL 2000, at 75 (Ben S. Bernanke & Kenneth Rogoff eds., 2001), <http://www.nber.org/chapters/c11055.pdf>. For an additional analysis of voter focus on the state of their pocketbooks close to election time, see Christopher H. Achen & Larry M. Bartels, *Musical Chairs: Pocketbook Voting and the Limits of Democratic Accountability* 4-5 (Sept. 2004) (unpublished manuscript), <https://my.vanderbilt.edu/larrybartels/files/2011/12/musical->

purposes of this Article, we do not need to resolve these economics debates. The key point here—which comports with that of the economics literature—is that politicians and the electorate are highly influenced by perceptions (and at times the reality) of economics.

As a consequence, climate change and energy transition debates are often framed in economic terms by both sides. Those opposing energy transition or action on climate change claim that the economic costs are too high; they argue that energy costs will rise, making electricity or fuel more expensive, or that the impact on companies will hurt the economy.¹⁴⁴ This concern is heightened in hard economic times. Responding to a 2014 New York Times–CBS News poll, Steven Swoboda, from Victorville, California remarked, “Because our economy is so bad . . . we need to focus on it and on jobs and not worry so much about global warming.”¹⁴⁵

To counter such views, those pushing for transition work to demonstrate the economic win-wins that can emerge, whether in terms of green jobs or savings from energy efficiency initiatives.¹⁴⁶ For example, Administrator McCarthy directly attacked the position that dealing with climate change hurts the economy in her September 2014 remarks. “When it comes to the American economy,” said McCarthy, “cutting pollution doesn’t dull our competitive edge, it sharpens it.”¹⁴⁷ She also took aim at critics who “hide behind the word ‘economy’ to protect their own special interests; when the truth is, climate action is in everyone’s best interests. . . . Simply put: the economy isn’t a reason to fear action, it’s a reason to take it.”¹⁴⁸ She then highlighted specific studies showing that climate action could propel economic growth and “that U.S. states that are still skeptical, like Arkansas, Louisiana, Oklahoma and Texas, would actually see an annual net economic benefit of up to about \$16

chairs.pdf (prepared for presentation at the Annual Meeting of the American Political Science Association held on September 1–5, 2004).

¹⁴⁴ For an example of economic arguments to oppose carbon regulation by a partisan group, see ENERGY VENTURES ANALYSIS, ENERGY MARKET IMPACTS OF RECENT FEDERAL REGULATIONS ON THE ELECTRIC POWER SECTOR (Nov. 2014), <https://www.heartland.org/sites/default/files/nov-2014-eva-energy-market-impacts-of-recent-federal-regulations-on-the-electric-power-sector.pdf>.

¹⁴⁵ Connelly, *supra* note 45.

¹⁴⁶ TED NORDHAUS & MICHAEL SHELLENBERGER, BREAK THROUGH: FROM THE DEATH OF ENVIRONMENTALISM TO THE POLITICS OF POSSIBILITY 9 (2007).

¹⁴⁷ Gina McCarthy, EPA Adm’r, Remarks by EPA Administrator Gina McCarthy at Resources for the Future (Sept. 25, 2014), <http://yosemite.epa.gov/opa/admpress.nsf/0/20AE16F3DF46A9A185257D5E004F6059>.

¹⁴⁸ *Id.*

billion dollars. That's billion with a 'b.'"¹⁴⁹ President Obama echoed this theme in his 2016 State of the Union Address, stating, "But even if the planet wasn't at stake; even if 2014 wasn't the warmest year on record—until 2015 turned out even hotter—why would we want to pass up the chance for American businesses to produce and sell the energy of the future?"¹⁵⁰

These references to the economic benefits of climate change action are just a couple examples of many such efforts over the last several years by the Obama Administration and others pushing for energy transition. While there is no shortage of politicians on both sides making economic arguments, the important question from a substantive reframing perspective is when economic development framings are most appropriate. In other words, (1) when and how does energy transition actually help the overall economy and people's individual budgets and job opportunities, and (2) in what contexts are economic arguments about energy transition most effective?

Numerous sets of economic experts have worked to answer the first question. For instance, at a global scale, the Global Commission on the Economy and Climate—a group comprised of former heads of government and finance ministers, as well as other leaders in the fields of economics, business, and finance advised by an expert group of economists—produced a September 2014 report assessing how to address climate change while supporting economic growth and development¹⁵¹:

The report's conclusion is that countries at all levels of income now have the opportunity to build lasting economic growth at the same time as reducing the immense risks of climate change. This is made possible by structural and technological changes unfolding in the global economy and opportunities for greater economic efficiency. The capital for the necessary investments is available, and the potential for innovation is vast. What is needed is strong political leadership and credible, consistent policies.

The next 15 years will be critical, as the global economy undergoes a deep structural transformation. It will not be "business as

¹⁴⁹ *Id.* Louisiana is a good case study of the complex dynamics relating to economic development, oil and gas exploitation, and climate change impacts. See Zoë Carpenter, *The Invisible Oil in Louisiana's Senate Race*, NATION (Oct. 1, 2014), <http://www.thenation.com/article/181832/well-oiled-race?page=0,1>.

¹⁵⁰ *Transcript: President Obama's Final State of the Union Address*, NPR NEWS (Jan. 13, 2016), <http://www.npr.org/2016/01/12/462831088/president-obama-state-of-the-union-transcript>.

¹⁵¹ GLOB. COMM'N ON ECON. & CLIMATE, BETTER GROWTH BETTER CLIMATE: THE NEW CLIMATE ECONOMY REPORT, THE SYNTHESIS REPORT 8 (Sept. 2014), <http://newclimateeconomy.report/TheNewClimateEconomyReport.pdf>.

usual.” The global economy will grow by more than half, a billion more people will come to live in cities, and rapid technological advance will continue to change businesses and lives. Around US\$90 trillion is likely to be invested in infrastructure in the world’s urban, land use and energy systems. How these changes are managed will shape future patterns of growth, productivity and living standards.¹⁵²

The report goes on to detail more specific strategies for cities, land use, and energy with an emphasis on three “drivers of change”: raising resource efficiency, investing in infrastructure, and stimulating innovation.¹⁵³ Another October 2014 report by the International Energy Agency (IEA) finds that the global market for energy efficiency investments had grown to between \$310 and \$360 billion in 2012, with 59% lower final consumption in IEA countries as a result.¹⁵⁴

Other reports have focused more specifically on the U.S. context. For example, the Metropolitan Policy Program at Brookings did a 2011 study of where and how the “clean economy”¹⁵⁵ has been producing jobs around the United States by examining data from every county from 2003 to 2010.¹⁵⁶ It found that the clean economy employs 2.7 million workers across numerous sectors, with the most growth in major metropolitan areas (64% overall and 75% of newer jobs) and the greatest regional concentration in the South.¹⁵⁷ These “green” jobs are manufacturing and export intensive and pay comparatively well for those without a high school diploma; almost half of these jobs are held by such workers (as compared to 37.2% in the economy as a whole), and “[a]pproximately 28.1 percent of all occupations in the clean economy are strong-wage (paying above the U.S. median) and low-skill (the percentage of workers with a high school diploma or less is higher than the

¹⁵² *Id.* (emphasis omitted).

¹⁵³ *Id.* at 8–9.

¹⁵⁴ INT’L ENERGY AGENCY, ENERGY EFFICIENCY MARKET REPORT 2014: EXECUTIVE SUMMARY (2014), <https://www.iea.org/Textbase/npsum/EEMR2014SUM.pdf>.

¹⁵⁵ MARK MURO, JONATHAN ROTHWELL & DEVASHREE SAHA, BROOKINGS INST., SIZING THE CLEAN ECONOMY: A NATIONAL AND REGIONAL GREEN JOBS ASSESSMENT 13–14 (2011), http://www.brookings.edu/~media/Series/resources/0713_clean_economy.pdf. The study defines the “clean economy” as “economic activity—measured in terms of establishments and the jobs associated with them—that produces goods and services with an environmental benefit or adds value to such products using skills or technologies that are uniquely applied to those products.” *Id.* It looks specifically at a number of job categories in agricultural and natural resources conservation; education and compliance; energy and resource efficiency; greenhouse gas reduction, environmental management, and recycling; and renewable energy using the Brookings–Battelle Clean Economy Database. *Id.* at 20.

¹⁵⁶ *Id.* at 3.

¹⁵⁷ *Id.* at 4.

national average) compared to 13.3 percent in the national economy.”¹⁵⁸ The report maps the different types of jobs being created in specific metropolitan areas around the country and links to a more detailed database.¹⁵⁹ Together, these studies and others provide helpful insights into how economic development can be and is being paired with energy transition.

In this Article, however, we are particularly concerned with addressing the second question: When can this pairing can help bridge partisan divides? The rest of the section focuses on specific examples of when this has occurred. An examination of “successes”—situations in which bipartisan support exists for energy transition on economic development grounds—reveals three common attributes. First, the economic benefits are real, tangible, and significant. Second, the transitional steps are cost-effective and easy to implement. Third, an established or growing industry sees a profit opportunity that aligns with goals of the environmental and labor coalitions.

Instances of Republican leaders’ support for renewable energy development and other clean energy technologies provide helpful examples of these attributes in action. In Michigan, for example, the wind industry expanded massively from 2.4 megawatts (MW) in capacity in 2007 to 287 MW in 2011.¹⁶⁰ This transition was likely aided by Michigan’s October 2008 renewable portfolio standard, which required utilities to generate at least 10% of the energy from renewable sources by 2015 and allows them to trade renewable energy certificates to meet this goal.¹⁶¹ Sixty-nine of Michigan’s seventy-two utilities were on track to meet this goal.¹⁶² The Natural Resources Defense Council reported that the state currently has 121 companies that supply wind components and that these companies employ 4,000 workers.¹⁶³

Michigan’s solar industry also expanded over a similar time period. It grew at a rate of 15.8% a year between 2003 and 2010, making it one of the fastest growing areas of Michigan’s economy.¹⁶⁴ As with the wind industry, this rapid development has translated into jobs; 121 companies that manufacture

¹⁵⁸ *Id.* at 23–24.

¹⁵⁹ *Id.* at 25–30.

¹⁶⁰ *Renewable Energy for America, Michigan*, NAT. RESOURCES DEF. COUNCIL, <http://www.nrdc.org/energy/renewables/michigan.asp> (last visited Dec. 29, 2015).

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.*

components for the solar industry employ 6,300 workers.¹⁶⁵ Michigan had 1,041 kilowatts of installed solar photovoltaic systems by the end of 2009, with an estimated 3,500 gigawatt capacity in the longer term.¹⁶⁶

The growth of the renewable energy industry and its jobs has helped to provide a basis for bipartisan support. Republican Governor Rick Snyder gave a December 2013 speech in which he outlined a vision for energy transition that involved decreasing coal consumption, increasing renewable energy targets, and simultaneously maintaining affordability, reliability, and environmental protection. A former political director for the Michigan Republican Party explained this support for energy transition in economic terms: “Renewable energy is an important piece of the economic puzzle, with Michigan’s manufacturing tradition and the sheer number of engineers we produce from state colleges and universities We are very well positioned to be a major player in the clean energy manufacturing sector.”¹⁶⁷ The combination of an economy in transition with considerable Midwestern wind resources seems to be making support for energy transition politically palatable across party lines.

However, even with this broad bipartisan support for the industry, the partisan politics around energy in Michigan remain complex and battles over the form that laws should take persist. On the one hand, Governor Snyder announced in March 2015 that he would like Michigan to meet 30% to 40% of its energy needs through a combination of renewable energy and energy efficiency measures.¹⁶⁸ This goal is significantly above the legally required 10%. On the other hand, Republicans in the Michigan legislature put forward a July 2015 energy policy proposal that would repeal the renewable portfolio standard and move towards a more flexible approach.¹⁶⁹ John Proos, a Michigan state senator, explained that the new policy would focus on carbon

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ Ben Adler, *Why Michigan’s Republican Governor Supports Clean Energy—Or Does He?*, GRIST (Jan. 3, 2014), <http://grist.org/politics/why-michigans-republican-governor-supports-clean-energy-or-does-he/>; see also Melissa Anders, *Gov. Rick Snyder Outlines Broad Vision for Michigan’s Energy Policy*, MLIVE (Dec. 19, 2013, 11:53 AM), http://www.mlive.com/business/index.ssf/2013/12/michigan_snyder_renewable_ener.html.

¹⁶⁸ Emily Lawler, *Michigan Gov. Rick Snyder Wants up to 40 Percent Clean Energy by 2025*, MLIVE (Mar. 13, 2015, 11:18 AM), http://www.mlive.com/lansing-news/index.ssf/2015/03/michigan_gov_rick_snyder_wants.html.

¹⁶⁹ Lindsey Smith, *New Energy Policy Would Get Rid of Michigan’s Renewable Energy Mandate*, MICH. RADIO (July 2, 2015), <http://michiganradio.org/post/new-energy-policy-would-get-rid-michigan-s-renewable-energy-mandate#stream/0>.

emissions, price, and reliability in order to give Michigan maximum flexibility to comply with the new federal rules on power plant greenhouse gas emissions discussed in depth in Part III.B.¹⁷⁰ Democrats, in contrast, proposed a bill, which has not gotten out of committee, that would raise the mandate to 20% by 2022.¹⁷¹

A similar phenomenon of greater bipartisan agreement over renewable energy paired with partisan conflict over the laws that support the industry occurs in other states with abundant renewable energy resources.¹⁷² For example, in Texas, the largest wind-producing state in the U.S., the politics are quite nuanced. Troy Fraser, a Republican state senator, co-sponsored the bill that created the state's Renewable Portfolio Standard (RPS) in 1999.¹⁷³ The Republican comptroller has explained the important economic role of its RPS: "After the RPS was implemented, Texas wind corporations and utilities invested \$1 billion in wind power, creating job . . . and increasing the rural tax base."¹⁷⁴

However, Senator Fraser led an effort to repeal the RPS in 2015, which passed in the Senate and then died in the House.¹⁷⁵ His publicly stated reasons for wanting to repeal the law, though, were economically based and he maintained his supportiveness of the renewable energy industry.¹⁷⁶ Senator Fraser explained that Texas met its renewables mandate in 2005 due to the rapid growth of the wind industry, and that federal production tax credits and

¹⁷⁰ *Id.*; see *infra* Part III.B.2.

¹⁷¹ Smith, *supra* note 169.

¹⁷² Beyond Michigan and Texas, for example, in the "red" state of Kansas, 73% of Republicans, 82% of Democrats, and 75% of Independents support the state's 2009 renewable energy law. Two-thirds of those polled supported augmenting the state's renewable energy law, even if energy bills increased. Jim Marston, *Fossil Fuel Industry's Tired Battle Against Clean Energy Is Also a Losing One*, FORBES (Apr. 12, 2014), <http://www.forbes.com/sites/edfenergyexchange/2014/04/12/fossil-fuel-industrys-tired-battle-against-clean-energy-is-also-a-losing-one/>. Kansas's renewable energy laws have also come under attack, along with those of other states. See Maria Gallucci, *Renewable Energy: Kansas Gov Brownback Pushes Plan to Weaken State Mandate; Texas, North Carolina Advance Similar Bills*, INT'L BUS. TIMES (May 6, 2015, 1:52 PM), <http://www.ibtimes.com/renewable-energy-kansas-gov-brownback-pushes-plan-weaken-state-mandate-texas-north-1911052>.

¹⁷³ Herman K. Trabish, 'Mission Accomplished?' *Inside the Battle over Texas Renewable Energy Incentives*, UTILITY DIVE (Apr. 22, 2015), <http://www.utilitydive.com/news/mission-accomplished-inside-the-battle-over-texas-renewable-energy-incen/389444/>.

¹⁷⁴ Marston, *supra* note 172 (ellipsis in original).

¹⁷⁵ See Jim Malewitz, *Senate Votes to End Renewable Energy Programs*, TEX. TRIB. (Apr. 14, 2015), <http://www.texastribune.org/2015/04/14/senate-votes-end-renewable-energy-programs/>; Trabish, *supra* note 173.

¹⁷⁶ See Trabish, *supra* note 173.

the availability of transmission currently drive the market rather than state renewable energy credits.¹⁷⁷ Those opposing the repeal also make economic arguments about the effect it would have on the price of renewable energy credits.¹⁷⁸ While some contend that Senator Fraser's effort may form part of the broader national campaign by the American Legislative Exchange Council (ALEC) to repeal renewable energy laws (discussed in more depth in Part III), Senator Fraser claims to have had no communication with ALEC in years and to simply be trying to make better policy.¹⁷⁹ Regardless of what motivates Senator Fraser, the key point for purposes of this Article is that the existence of a strong wind industry has helped shift the debate from the value of renewables to how law should interact with them.

As the Michigan and Texas examples illustrate, meaningful economic success, rather than just lip service to "green jobs," seems to help build support for programs that support energy transition and reduce emissions, often without using the words "climate change." Although this support is not immune to partisan battles, and even disagreements within parties, the economic alignment helps build broader support. As discussed in more depth in Part III.A, these kinds of alignments can be particularly effective at local scales. Within Texas, for example, one city chose to go 100% renewable because it was the cheapest form of energy available. Interim City Manager Jim Briggs explained, "I'm probably the furthest thing from an Al Gore clone you could find We didn't do this to save the world—we did this to get a competitive rate and reduce the risk for our consumers."¹⁸⁰

The potential for economic opportunity to create greater partisan alignment is not simply in individual states and their cities. Interactions with "green" companies show a similar pattern. The shift in the last decade of Republican public portrayal of electric car company Tesla, for example, further reinforces the ways in which economic success and benefits can dampen partisanship.

Tesla has experienced radical shifts in how Republican leaders have portrayed it over time as it has become more economically successful. Although Tesla received support from moderate Republican Governor Arnold

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

¹⁸⁰ Tom Dart, *Texas City Optis for 100% Renewable Energy—To Save Cash, Not the Planet*, GUARDIAN (Mar. 29, 2015), <http://www.theguardian.com/environment/2015/mar/28/georgetown-texas-renewable-green-energy>.

Schwarzenegger as early as 2003, it became a target for Republican politicians after receiving a \$465 million Advanced Technology Vehicle Manufacturing loan from the Department of Energy in 2010.¹⁸¹ Following the bankruptcy of Solyndra, which also received such a loan, Governor Mitt Romney described Tesla as a “loser,”¹⁸² a sentiment Governor Sarah Palin echoed.¹⁸³ Governor Palin went on in a Facebook post to portray the company’s product as the “Obama-subsidized Tesla that turns into a ‘brick’ when the battery completely discharges and then costs \$40,000 to repair.”¹⁸⁴

However, in 2013, Tesla paid back its loan with interest nine years early even as Detroit’s traditional car companies continued to owe the federal government money from their bail out.¹⁸⁵ Tesla then developed plans to invest in a lucrative battery factory. As a result, Republican Governor Rick Perry and Senator Marco Rubio (R–Fla.) began to support repealing state laws that prevent Tesla from selling through traditional franchise agreements.¹⁸⁶ Even conservative commentator Bill O’Reilly said on his show in March 2014 that “[e]verybody on the planet should be rooting for Tesla.”¹⁸⁷ Mark Muro, a senior fellow at the Brookings Institution, explicitly connected Tesla’s

¹⁸¹ See Ashlee Vance, *Tesla Pays off Its \$465 Million ‘Loser’ Loan*, BLOOMBERG BUS. (May 22, 2013), <http://www.bloomberg.com/bw/articles/2013-05-22/tesla-pays-off-its-465-million-loser-loan>.

¹⁸² See Betsy Isaacson, *Mitt Romney’s Tesla Diss Triggers Fierce Reactions*, HUFFINGTON POST (Oct. 4, 2012, 3:47 PM), http://www.huffingtonpost.com/2012/10/04/mitt-romney-tesla_n_1939531.html; see, e.g., Nia-Malika Henderson, *Mitt Romney Visits Solyndra Headquarters, Knocks President Obama*, WASH. POST (May 31, 2012), http://www.washingtonpost.com/politics/mitt-romney-visits-solyndra-headquarters-knocks-president-obama/2012/05/31/gJQAAnge5U_story.html.

¹⁸³ Sarah Palin, FACEBOOK (Apr. 5, 2013), <https://www.facebook.com/sarahpalin/posts/10151547784498588>.

¹⁸⁴ *Id.*

¹⁸⁵ Tesla noted, “Following this payment, Tesla (TLSA) will be the only American car company to have fully repaid the government.” Vance, *supra* note 181.

¹⁸⁶ David R. Baker, *Republicans Who Once Reviled Tesla, Now Praise It*, SFGATE (Apr. 14, 2014, 8:22 AM), <http://www.sfgate.com/politics/article/Republicans-who-once-reviled-Tesla-now-praise-it-5399733.php>. For discussion of battles over these laws in Texas and Michigan in particular, see Stephen Edelstein, *Tesla Is Intensifying Its Fight to Do Direct Sales in Michigan*, BUS. INSIDER (Aug. 6, 2015, 12:34 PM), <http://www.businessinsider.com/tesla-is-intensifying-its-fight-to-do-direct-sales-in-michigan-2015-8>; Lauren Etter, *Texas Isn’t Open for Tesla’s Direct Auto Sales, Abbott Says*, BLOOMBERG BUS. (July 14, 2015, 5:00 PM), <http://www.bloomberg.com/news/articles/2015-07-14/texas-isn-t-open-for-tesla-s-direct-sales-says-governor-abbott>; Micheline Maynard, *Michigan to Tesla Motors: You’re Not Welcome*, FORBES (Oct. 21, 2014, 2:33 PM), <http://www.forbes.com/sites/michelinemaynard/2014/10/21/michigan-to-tesla-motors-youre-not-welcome/>; Maxell Tani, *Tesla’s Empty Threat Against Texas*, BUS. INSIDER (June 1, 2015, 5:48 PM), <http://www.businessinsider.com/teslas-empty-threat-against-texas-2015-6>.

¹⁸⁷ Baker, *supra* note 186.

economic success with partisan dampening: “This could be, for either party, a pillar for a very appealing story on economic change.”¹⁸⁸

This Republican support for Tesla is likely driven by multiple factors, such as Governor Perry wanting Tesla to site its lucrative new battery factory in Texas, Governor Perry and Senator Rubio trying to distance themselves from Governor Chris Christie, and both of them desiring to convey support for free markets. Moreover, the story of why San Antonio ultimately lost out in its bid for the factory includes Nevada offering financial state support that Texas did not (although San Antonio claims its package was still bigger). As San Antonio Economic Development Foundation head Mario Hernandez put it, “Our package didn’t have any state incentives. It was San Antonio vs. Nevada, the entire state.”¹⁸⁹ But these nuances do not undermine the core idea running across these situations: when energy transition has tangible and demonstrable economic benefits, politicians on both sides of the aisle and the public who elect them are more willing to get on board.

Moreover, just as in the above-described conflicts in Michigan and Texas, the divides are not always along partisan lines. Republicans take different positions on the value of Tesla and renewable energy. Climate Desk’s Associate Producer Tim McDonnell explained,

The Republican-eat-Republican battle over Tesla mirrors another clean energy fight playing out nationwide. Conservatives aligned with large utility companies are squaring off with the solar power industry and libertarian-leaning Republicans over rules to allow homeowners with solar panels to sell excess power back to the grid, a policy known as net metering, which is allowed in more than 40 states.¹⁹⁰

The battles thus become about competing economic interests rather than entrenched partisan differences.

Overall, these examples of wind energy and electric cars illustrate that once clean energy industries get a significant economic foothold, they can generate

¹⁸⁸ *Id.*

¹⁸⁹ Neal Morton, *Memo: S.A.’s Incentives for Tesla Topped Nevada’s*, SAN ANTONIO EXPRESS-NEWS (Sep. 9, 2014, 10:12 PM), <http://www.expressnews.com/business/local/article/Memo-S-A-s-incentives-for-Tesla-topped-Nevada-s-5744838.php>.

¹⁹⁰ Tim McDonnell, *GOP Lawmakers Scramble to Court Tesla*, MOTHER JONES (Mar. 27, 2014, 6:00 AM) (citation omitted), <http://www.motherjones.com/blue-marble/2014/03/gop-lawmakers-scramble-green-energy-cash>.

their own momentum and support for ramping up clean energy programs. They also often become advocates for energy transition against those who seek to block it. An interesting instance of such advocacy is clean energy firms, including power companies with significant investments in low carbon energy sources, increasingly intervening in opposition to lawsuits brought to block climate change regulation. These companies work to support the case of regulators seeking to expand clean energy programs. One lawyer, who works for a major power generator, noted that in the context of the company increasing its own clean-energy-generating portfolio: “They’re generally interested from a financial perspective in anything that moves or requires moves towards cleaner generation.”¹⁹¹ Like in the above examples of Republican politicians, these companies see the bottom line benefits of supporting energy transition.

Moreover, these companies’ support for climate change or clean energy regulation does not simply influence what regulatory approaches are possible. It also helps to dampen the partisan quality of the debate by making these disputes among industry rather than environmentalists in opposition to industry. As one of the litigators in these cases explained, “[I]t changes the discourse to have it not being industry versus government agencies and enviros. [I]t changes the discourse dramatically when they can no longer say, well its power generators versus EPA; well, there’s power generators on each side.”¹⁹²

Clean energy initiatives that are cost-effective and economically beneficial to industry and communities thus can be a basis for building broader coalitions of interested stakeholders than an appeal to act on climate change would.

¹⁹¹ Interview with Participant 5, *supra* note 17.

¹⁹² *Id.*

C. “Every Crisis Is an Opportunity”



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Just as meaningful linkages to economic development provide an opportunity to advance energy transition in ways that help to mitigate climate change, extreme weather can increase receptivity to adaptive action. People tend to connect extreme weather events to climate change, even though, as a scientific matter, sea level rise or broader patterns of extreme events are easier to link than a particular disaster.¹⁹⁴ For example, the Yale Project on Climate Change Communication and the George Mason University Center for Climate Change Communication found in a joint study that

[a] large majority of Americans believe that global warming made several high profile extreme weather events worse, including the unusually warm winter of December 2011 and January 2012 (72%), record high summer temperatures in the U.S. in 2011 (70%), the drought in Texas and Oklahoma in 2011 (69%), record snowfall in the U.S. in 2010 and 2011 (61%), the Mississippi River floods in the spring of 2011 (63%), and Hurricane Irene (59%).¹⁹⁵

¹⁹³ © 2012 Horsey. Los Angeles Times. All rights reserved. Distributed by Tribune Content Agency. David Horsey, L.A. TIMES (2012), http://www.psu.edu/dept/e-education/blogs/energy_policy/la-tot-cartoons-pg-obama-romney-climate-change-hurricane-sandy.png.

¹⁹⁴ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, MANAGING THE RISKS OF EXTREME EVENTS AND DISASTERS TO ADVANCE CLIMATE CHANGE ADAPTATION 40 (2012), https://www.ipcc-wg2.gov/SREX/images/uploads/SREX-All_FINAL.pdf.

¹⁹⁵ YALE PROJECT ON CLIMATE CHANGE COMM’N & GEORGE MASON UNIV. CTR. FOR CLIMATE CHANGE COMM’N, EXTREME WEATHER, CLIMATE & PREPAREDNESS IN THE AMERICAN MIND 3 (2012), <http://environment.yale.edu/climate-communication/files/Extreme-Weather-Climate-Preparedness.pdf>.

However, like broader questions of climate change science, there is a partisan divide in how people view natural disaster and climate change, even following a severe weather event. The good news from the perspective of fostering action is that, even with partisan differences, a substantial majority of people—including almost half of Republicans—support governmental assistance for communities affected by natural disaster (80.1% of Democrats, 62.0% of Independents, and 48.2% of Republicans, which resulted in 64.3% overall).¹⁹⁶ However, the parties were far more sharply divided on whether climate change is related to more frequent and severe natural disasters (71.6% of Democrats, 50.7% of Independents, and 24.8% of Republicans, which resulted in 51.2% overall).¹⁹⁷

This gap suggests that a key to adaptation planning may be to frame action in terms of disaster resilience and response rather than climate change itself.¹⁹⁸ This strategy appears to bear out in practice, as the examples we explore in this section illustrate. This section provides in-depth exploration of Superstorm Sandy, which, because of its timing and location, provides a particularly helpful example of the complex dynamics around disaster, climate change, and partisanship. We also highlight other examples that provide additional insights into the ways in which disaster can help shift framing and provide opportunities for bipartisan action.

When Superstorm Sandy ravaged the East Coast one week before the 2012 election, the disaster caused a major shift in the partisan dialogue about energy and climate change. In the intense presidential contest between President Obama and Governor Romney, climate change finally lost its “Lord Voldemort” status.¹⁹⁹ As Mike Tidwell of left-leaning magazine *The Nation* put it, “The presidential candidates decided not to speak about climate change, but climate change has decided to speak to them.”²⁰⁰

This shift in the public dialogue reinforces the ways in which disaster resiliency framing can not only support action but also help overcome the

¹⁹⁶ *Omnibus Poll*, YOUGov (Oct. 29, 2012), <http://big.assets.huffingtonpost.com/hurricaneclimatetabs.pdf>.

¹⁹⁷ *Id.*

¹⁹⁸ See Verchick, *supra* note 24, at 41.

¹⁹⁹ See *supra* note 48 and accompanying text.

²⁰⁰ Dan Merica, *Sandy Reminds Us of Climate Change and Other Forgotten Campaign Issues*, CNN (Oct. 30, 2012, 5:40 PM), <http://www.cnn.com/2012/10/30/politics/forgotten-campaign-issues/>.

silencing effect that partisanship can have in this context.²⁰¹ Until the devastating storm, climate change had not been mentioned by either candidate since their statements to a science organization in September 2012.²⁰² Although the candidates did at times mention renewable energy, climate change had not come up either on the campaign trail or in presidential debates. The storm changed that in the last few days of the election campaign and, perhaps more importantly, for politicians and litigators—especially Democrats—in the months that followed. In effect, Superstorm Sandy made it acceptable for Democratic, and even some Republican, candidates to talk about climate change by giving it a new frame of reference. Climate change was not an abstract global pollution problem but rather something that, left unaddressed, could harm people, homes, and families.²⁰³

Perhaps the most dramatic moment in this political reaction took place a few days after the storm, and just three days before the election. New York City Mayor Michael Bloomberg, a political independent, cited climate change as he endorsed President Obama in an article entitled *A Vote for a President to Lead on Climate Change*:

The devastation that Hurricane Sandy brought to New York City and much of the Northeast—in lost lives, lost homes and lost business—brought the stakes of next Tuesday’s presidential election into sharp relief.

Our climate is changing. And while the increase in extreme weather we have experienced in New York City and around the world may or may not be the result of it, the risk that it may be—given this week’s devastation—should compel all elected leaders to take immediate action.²⁰⁴

²⁰¹ The political silencing of dialogue over climate change does not just occur in the election context. For example, a number of news outlets reported that Florida Department of Environmental Protection employees may have been forbidden to use the term “climate change” or “global warming” in their official communications. See Terrence McCoy, *Threatened by Climate Change, Florida Reportedly Bans the Term ‘Climate Change,’* WASH. POST (Mar. 9, 2015), <https://www.washingtonpost.com/news/morning-mix/wp/2015/03/09/florida-state-most-affected-by-climate-change-reportedly-bans-term-climate-change/>. Spokespeople from the state and governor’s office deny this claim, however. *Id.*

²⁰² Merica, *supra* note 200.

²⁰³ See *id.* The fact that Democrats who believed in climate action did not feel comfortable talking about climate change in that election prior to the storm reinforces the kinds of differences between the parties and their strategies highlighted by Hacker and Pierson in *Off Center*. See HACKER & PIERSON, *supra* note 42, at 2.

²⁰⁴ Michael R. Bloomberg, *A Vote for a President to Lead on Climate Change*, BLOOMBERG VIEW (Nov. 1, 2012, 2:55 PM), <http://www.bloombergview.com/articles/2012-11-01/a-vote-for-a-president-to-lead-on-climate-change>.

President Obama responded to Mayor Bloomberg's endorsement by also mentioning the issue directly for the first time in weeks: "Climate change is a threat to our children's future, and we owe it to them to do something about it."²⁰⁵

The Mayor Bloomberg incident was not an isolated one; rather, it epitomized a changed Democratic campaign. Leading Democratic campaign surrogates also started referencing climate change directly in the week after Superstorm Sandy. For example, President Clinton said at a Minnesota rally, "[Governor Romney] ridiculed the president for his efforts to fight global warming in economically beneficial ways. He said, 'Oh, you're going to turn back the seas In my part of America, we would like it if someone could've done that yesterday.'"²⁰⁶ Vice President Gore made similar statements that week.²⁰⁷ In addition, environmental advocacy groups made an attack ad highlighting Governor Romney's comments on sea level rise, which ended with "Tell Mitt Romney: climate change isn't a joke."²⁰⁸

President Obama's public and explicit focus on climate change continued following his reelection. For instance, he mentioned climate change as one of his main priorities in his *Time* "Person of the Year" interview that December.²⁰⁹ He also often continued to make links to natural disaster when he did so. In his second inaugural address, President Obama stated, "Some may still deny the overwhelming judgment of science, but none can avoid the devastating impact of raging fires and crippling drought and more powerful storms."²¹⁰ Throughout his second term, President Obama has continued to roll out new executive branch initiatives—at times quite controversial, like his efforts to regulate power plants—to advance both mitigation and adaptation, often using similar rhetoric. Secretary of State John Kerry's remarks during the 2015 Paris negotiations reinforced this theme: "In recent years, what we used

²⁰⁵ Katherine Bagley, *Climate Science Makes an 11th-Hour Comeback in 2012*, INSIDE CLIMATE NEWS (Dec. 28, 2012), <http://insideclimatenews.org/news/20121228/climate-change-science-global-warming-hurricane-sandy-obama-mayor-bloomberg-drought-wildfires-arctic-melt-ippc>.

²⁰⁶ Suzanne Goldenberg, *Sandy Puts Climate Change Back on the US Election Agenda*, GUARDIAN (Oct. 31, 2012, 3:56 PM), <http://www.theguardian.com/environment/2012/oct/31/sandy-climate-change-us-election>.

²⁰⁷ *Id.*

²⁰⁸ Elise Foley, *Mitt Romney Climate Change Brush-off Highlighted in New Ad*, HUFFINGTON POST (Nov. 3, 2012, 1:07 PM), http://www.huffingtonpost.com/2012/11/03/mitt-romney-climate-change_n_2069003.html.

²⁰⁹ Michael Scherer, *2012 Person of the Year: Barack Obama, the President*, TIME (Dec. 19, 2012), <http://poy.time.com/2012/12/19/person-of-the-year-barack-obama/>.

²¹⁰ Barack Obama, U.S. President, Inaugural Address (Jan. 21, 2013), <http://www.whitehouse.gov/the-press-office/2013/01/21/inaugural-address-president-barack-obama>.

to think of as extreme weather has become the new normal. It's hard to even turn on the news without hearing about a particularly devastating storm, a drought, a flood, or a wildfire."²¹¹

However, this change in public behavior by Democratic politicians was not necessarily a harbinger of massively decreased partisanship. The increasingly vocal focus on climate change and its link to disaster by Democrats did not generally change the ways in which many Republican politicians were referencing the problem during the election or since. Governor Romney, when pushed by someone in a crowd about whether he still thought climate change was a joke, said, "As a matter of fact, if you'd like to, I know you're filming, if you'd like to see my view on global warming, I wrote a book, and there's a chapter on global warming and you'll see what I think we can do to deal with it."²¹² That book acknowledged that climate change was happening and that human activity was a contributing factor, but queried the extent of the contribution by human activity versus factors outside our control.²¹³

Similarly, although Governor Christie praised President Obama's disaster response in the immediate aftermath of the storm and acknowledged anthropogenic climate change prior to the storm in 2011, he has largely avoided direct discussion of climate change since. Governor Christie did maintain in 2013 that there was no proof the climate change caused Superstorm Sandy; while this statement received a lot of press at the time, climate scientists largely agree that one cannot prove that climate change caused any particular storm, though it increases the risks in a variety of ways.²¹⁴ In the lead up to the 2016 elections, Governor Christie has continued to resist climate change mitigation measures such as New Jersey rejoining

²¹¹ Kerry, *supra* note 19.

²¹² Elyse Siegal, *Mitt Romney Pressed on Climate Change: 'Do You Still Think the Rising of the Seas Is Funny?'*, HUFFINGTON POST (Nov. 2, 2012, 11:27 PM), http://www.huffingtonpost.com/2012/11/02/mitt-romney-climate-change_n_2068608.html.

²¹³ *Id.*

²¹⁴ Adam Edelman, *N.J. Gov. Chris Christie: No Proof Superstorm Sandy Was Caused by Climate Change*, N.Y. DAILY NEWS (May 21, 2013, 11:39 AM), <http://www.nydailynews.com/news/politics/chris-christie-reverses-stance-climate-change-article-1.1350260>; Suzanne Goldenberg, *Climate Change 'Triple Threat' Increases Severe Flooding Risk in Biggest US Cities*, GUARDIAN (July 27 2015, 1:22 PM), <http://www.theguardian.com/environment/2015/jul/27/climate-change-triple-threat-flooding-new-york-los-angeles-boston>; Kate Zernike, *One Result of Hurricane: Bipartisan Flows*, N.Y. TIMES (Oct. 31, 2012), <http://www.nytimes.com/2012/11/01/nyregion/in-stunning-about-face-chris-christie-heaps-praise-on-obama.html>.

the region's cap-and-trade efforts.²¹⁵ And New York-based 2016 presidential candidate Donald Trump—as well as several other leading Republican candidates in that election—has been consistent in his denial of climate change science regardless of severe weather events. He tweeted in November 2012 just after Superstorm Sandy: “It’s extremely cold in NY & NJ—not good for flood victims. Where is global warming?”²¹⁶

But, even in this polarized environment, the response to Superstorm Sandy did change some politicians' views and allowed new bipartisan efforts to move forward. For instance, Representative Michael Grimm (R–N.Y.), who represented a district hard-hit by Superstorm Sandy, reversed his initial skepticism of climate science and publicly accepted the scientific consensus.²¹⁷ At a more macro level, New York's Community Risk and Resiliency Act—the first law in the nation to require that communities design projects to incorporate climate impacts into project permitting and funding—passed with bipartisan support.²¹⁸

Public opinion polling reinforces both that Superstorm Sandy has had some influence on public views of climate change—particularly in the immediate aftermath of the storm and in regions most affected by the storm—and that a partisan divide remains. With respect to the 2012 presidential election, although it is unclear how much Mayor Bloomberg's eleventh-hour endorsement helped President Obama, CBS News exit polling suggested that Superstorm Sandy mattered in the election.²¹⁹ Not surprisingly, based on the discussion of the previous section, 60% of voters said the economy was the most important issue in their vote.²²⁰ Forty-two percent, though, said that President Obama's response to Superstorm Sandy, which was viewed

²¹⁵ Coral Davenport, *With Eye on 2016, Christie Resists Climate Change Plan*, N.Y. TIMES (Sept. 18, 2014), <http://www.nytimes.com/2014/09/19/us/politics/with-eye-on-2016-christie-resists-climate-change-plan-for-new-jersey.html>.

²¹⁶ Bonnie Kavoussi, *Donald Trump Denies Climate Change After Hurricane Sandy*, HUFFINGTON POST (Nov. 2, 2012), http://www.huffingtonpost.com/2012/11/05/donald-trump-climate-change_n_2077635.html.

²¹⁷ Sahil Kapur, *GOP Climate Change Skeptic Becomes a True Believer After Sandy*, TALKING POINTS MEMO (Apr. 25, 2014, 2:20 PM), <http://talkingpointsmemo.com/dc/michael-grimm-climate-change-science>.

²¹⁸ Katherine Bagley, *Climate Change Law in New York Bridges Partisan Divide*, INSIDE CLIMATE NEWS (Aug. 5, 2014), <http://insideclimateneeds.org/news/20140805/climate-change-law-new-york-bridges-partisan-divide>.

²¹⁹ Brian Montopoli, *Early Exit Poll: 60 Percent Say Economy Top Issue*, CBS NEWS (Nov. 6, 2012, 7:00 PM), <http://www.cbsnews.com/news/early-exit-poll-60-percent-say-economy-top-issue/>.

²²⁰ *Id.*

positively according to polls, was a factor as well.²²¹ However, the polls did not indicate how climate-specific those views were.²²²

Beyond the 2012 election itself, polls suggest that at least in the aftermath of Superstorm Sandy, people in both parties connected the storm to climate change, albeit with a partisan gap. For example, a Zogby Analytics poll in November 2012 highlighted

the dramatic impact 2012's extreme weather has had across party lines, with half of Republicans, 73 percent of independents and 82 percent of Democrats saying they're worried about the growing cost and risks of extreme weather disasters fueled by climate change.²²³

Pollster John Zogby noted that this represented “a major change from our December 2009 poll, which showed two-thirds of Republicans and nearly half of political independents saying they were ‘not at all concerned’ about global climate change and global warming.”²²⁴ He concluded, “The political climate has shifted and members of Congress need to catch up with their constituents.”²²⁵ A poll by Siena Research Institute of New Yorkers in that time period found similar results: “In every region of New York, at least 63 percent of voters say that the extreme weather of 2011 and 2012 demonstrates that climate change in action. More than two-thirds of independents and nearly half of Republicans also say that Superstorm Sandy was the result of climate change.”²²⁶

However, these post-disaster shifts in opinion and focus on these issues may lack staying power. For example, a trends analysis done a year after Superstorm Sandy found that web searches and media references spiked in the aftermath of that storm and other climate-related events, but then declined again.²²⁷ Moreover, in April 2013 polling in New Jersey, just six months after

²²¹ *Id.*

²²² *Id.*

²²³ Miles Grant, *New Poll: Sandy Fuels Widespread Concern on Climate Change*, NAT'L WILDLIFE FED'N (Nov. 14, 2012), <https://www.nwf.org/News-and-Magazines/Media-Center/News-by-Topic/Global-Warming/2012/11-14-12-New-Poll-Sandy-Fuels-Widespread-Concern-on-Climate-Change.aspx>.

²²⁴ *Id.*

²²⁵ *Id.*

²²⁶ Whitney Allen, *Poll: Superstorm Sandy Linked To Climate Change By 69% of New Yorkers, Including 73% of Independents*, CLIMATEPROGRESS (Dec. 2, 2014, 9:30 AM), <http://thinkprogress.org/climate/2012/12/04/1275841/poll-69-percent-of-new-yorkers-link-superstorm-sandy-with-climate-change/>.

²²⁷ Brian Kahn, *Despite Policy Changes, Hurricane Sandy Hasn't Shifted Climate Change Narrative*, HUFFINGTON POST (Oct. 29, 2013, 5:42 PM), http://www.huffingtonpost.com/2013/10/29/hurricane-sandy-climate-narrative_n_4174921.html.

Superstorm Sandy, a clear partisan divide existed in how people viewed the relationship between disasters and climate change. “More than 80 percent of Democrats see climate change causing recent disasters, as do 60 percent of independents. But only about 33 percent of Republicans agree, while 61 percent think the storms were not climate change driven.”²²⁸

In essence, disaster may provide a short-term window for bipartisan action on climate change, with the effectiveness of this framing receding with the public memory of the event. A similar dynamic appears to be playing out with respect to other high-profile weather-related impacts, such as the ongoing drought in California.²²⁹ The unprecedented nature of the drought and the severity of its effects have opened up space for discussions of law reform that would be too hard at other times. Not only has the state—led by Governor Jerry Brown’s office—ramped up the drought response by casting it as an issue of emergency management,²³⁰ but lawmakers have also passed a suite of new water measures, in some cases with bipartisan support. In August 2014, Governor Brown signed bipartisan legislation (which passed the Senate 37–0 and the Assembly 77–2) that put a comprehensive water bond (later accepted) before voters at the November elections.²³¹

More controversially, and over opposition from Republican legislators and farming groups,²³² in September 2014, the state passed historic groundwater legislation that will overhaul California’s long-standing “pump-as-you-please” policy to require statewide regulation of underground water resources and

²²⁸ *Sandy’s Legacy: Climate Change Is Real for New Jerseyans, Rutgers-Eagleton Poll Finds*, EAGLETON POLL BLOG (Apr. 29, 2013, 1:40 PM), <http://eagletonpollblog.wordpress.com/2013/04/29/superstorm-sandy-and-global-climate-change-beliefs/>.

²²⁹ Whether weather events like droughts that develop over a longer timeframe should be classed as a “disaster” beside events with a sudden or short-term impact like floods or hurricanes is a live question in the disaster law literature and practice. Like floods or hurricanes, droughts can cause enormous social, economic and environmental impacts, but the extent of those impacts—the severity of the drought—is not known until the rains come again and the event ends. See UNIV. OF FLA. INST. OF FOOD & AGRIC. SCI., *THE DISASTER HANDBOOK: MASTER GUIDE* § 16.3 (2012), <http://disaster.ifas.ufl.edu/masterfr.htm>; MARK BALDASSARE ET AL., PUB. POLICY INST. CAL., *PPIC STATEWIDE SURVEY: CALIFORNIANS AND THEIR GOVERNMENT* 2–3 (Sept. 2014), http://www.ppic.org/content/pubs/survey/S_914MBS.pdf; *Natural Disasters: Severe Drought*, EPA, <http://epa.gov/naturaldisasters/drought.html> (last visited Sept. 15, 2015).

²³⁰ Press Release, Office of Gov. Edmund G. Brown, Jr., Governor Brown Declares Drought State of Emergency (Jan. 17, 2014), <https://www.gov.ca.gov/news.php?id=18368>.

²³¹ Press Release, Office of Gov. Edmund G. Brown, Jr., Governor Brown Signs Legislation to Put Water Bonds Before Voters (Aug. 13, 2014), <https://www.gov.ca.gov/news.php?id=18653>.

²³² Jim Nielsen, *California Seeks to Take Farm Water Rights*, SFGATE (Aug. 27, 2014, 5:14 PM), <http://www.sfgate.com/default/article/California-seeks-to-take-farm-water-rights-5716603.php>.

impose requirements for sustainable use.²³³ Water policy advocates argue now is the time for action to achieve long-lasting policy changes that will improve both water and climate change resilience.²³⁴ As one advocate put it, “In the world of public policy, a drought is a terrible thing to waste.”²³⁵ Public polling reinforces this view. In September 2014, 24% of Californians named dealing with the drought as the state’s top issue, a marked increase from the 1% who took this view in 2012 before the drought began.²³⁶

In addition to influencing policymakers and the public directly, disasters and other tangibly felt impacts can also open the door for litigation that can shift policy.²³⁷ For instance, in the aftermath of Superstorm Sandy, there was a flurry of cases in the United States focused on the extent to which public authorities must compensate landowners when undertaking protective coastal armoring measures;²³⁸ the scope for insurers to avoid coverage or impose “hurricane deductibles” for damage from the storm;²³⁹ and claims in negligence against building owners who failed to take out adequate insurance to protect common property assets.²⁴⁰ Most of these cases have not raised climate change explicitly, but they influence the measures that people will take in the future to prepare for severe storms. Given that climate change increases of the likelihood of such storms and the vulnerability of coastal communities to them, such measures serve as a form of climate change adaptation.²⁴¹

Some of the post-Superstorm Sandy cases did focus on climate change more explicitly and form part of a broader body of emerging adaptation litigation that we have explored in our prior scholarship.²⁴² One of the most

²³³ See Sustainable Groundwater Management Act, 2014 Cal. Stat. ch. 346 (codified at CAL. WATER CODE §§ 10720–10737.8).

²³⁴ David Festa, *3 Investment Ideas to Sustain Water in the American West*, ENVTL. DEF. FUND: EDF VOICES (July 1, 2015), <https://www.edf.org/blog/2015/07/01/3-investment-ideas-sustain-water-american-west>.

²³⁵ Ellen Hanak, Pub. Policy Inst. of Cal., *Drought: Lessons for Adaptation and Policy Reform 20* (Sept. 8, 2014), <http://www.worldbank.org/content/dam/Worldbank/Feature%20Story/SDN/Water/events/IWREC2014-Keynote-Ellen-Hanak-Sept8.pdf>.

²³⁶ BALDASSARE ET AL., *supra* note 229; Ellen Hanak, Pub. Policy Inst. of Cal., *Water, Climate Change, and Adaptation* (Sept. 26, 2014).

²³⁷ Jacqueline Peel & Hari M. Osofsky, *Sue to Adapt?*, 99 MINN. L. REV. 2177 (2015).

²³⁸ *Borough of Harvey Cedars v. Karan*, 70 A.3d 524 (N.J. 2013).

²³⁹ See Bibeka Shrestha, *Why All Is Still Quiet on the Sandy Litigation Front*, LAW360 (Oct. 25, 2013, 8:50 PM), <http://www.law360.com/articles/483159/why-all-is-still-quiet-on-the-sandy-litigation-front>.

²⁴⁰ See Barbara Ross, *Luxury Condo Building in Financial District Hit in \$35 Million Hurricane Sandy Suit*, N.Y. DAILY NEWS (Nov. 19, 2012), <http://www.nydailynews.com/life-style/real-estate/luxury-condo-hit-35-million-sandy-suit-article-1.1204856>.

²⁴¹ See Peel & Osofsky, *supra* note 237.

²⁴² *Id.*

interesting, and potentially most influential, cases to emerge post-Sandy is the rates case involving the power company Consolidated Edison (ConEd), which was decided by the New York Public Services Commission (PSC) in early 2014. The case itself was preceded by a petition filed with the PSC by the Columbia University Center for Climate Change and a group of non-governmental organizations in the aftermath of Superstorm Sandy. The PSC serves as the primary regulator of New York's utilities, which provide power throughout the state. The petition asked the commission to "use its regulatory authority to require all utility companies within its jurisdiction to prepare and implement comprehensive natural hazard mitigation plans to address the anticipated effects of climate change."²⁴³ The petition linked energy and environmental planning in its call for public utilities to plan for hazard mitigation and disaster response under conditions of increased risk from climate change.²⁴⁴

The petition was only the first step in this case. When ConEd—the largest utility in the State of New York—filed a petition with the Commission in January 2013 for changes to its rates, the Columbia University Center for Climate Change and other NGOs formally intervened and subsequently participated in the adjudicatory hearings that followed.²⁴⁵ During the rate case litigation, a Storm Hardening and Resiliency Collaborative formed to negotiate terms of a settlement and to implement the settlement agreement.²⁴⁶ The Collaborative included four working groups that focused on storm hardening design standards, alternative resiliency strategies, natural gas system resiliency, and risk assessment/cost benefit analysis.²⁴⁷

As a result of discussions in the Collaborative's working groups, ConEd committed to several measures to improve the resiliency of its electricity and gas systems in the settlement agreement approved by the PSC. These included

²⁴³ Letter from Anne R. Siders et al., Associate Director, Columbia Univ. Ctr. for Climate Change Law, to Jaclyn A. Brillling, Secretary, N.Y. State Pub. Serv. Comm'n (Dec. 12, 2012), http://web.law.columbia.edu/sites/default/files/microsites/climate-change/files/Publications/PSCPetitionNaturalHazardPlanning_0.pdf.

²⁴⁴ *Id.*

²⁴⁵ Anita Jain et al., *Con Edison to Take New Measures to Protect Against the Effects of Climate Change*, ENVTL. DEF. FUND (Feb. 20, 2014), <https://www.edf.org/media/con-edison-take-new-measures-protect-against-effects-climate-change>.

²⁴⁶ *Id.*

²⁴⁷ *Id.*

a new design standard for infrastructure in flood zones;²⁴⁸ implementation of capital programs and projects to “storm harden” its electric, gas, and steam systems in the face of anticipated climate change and sea level rise;²⁴⁹ and conduct of a climate change vulnerability study encompassing risks such as rising heat and more severe storms.²⁵⁰

Already, the ConEd Rate Case decision is being hailed as “an historic decision that will serve as a nationwide model.”²⁵¹ Beyond its contribution to growing adaptation efforts in the United States, the case neatly illustrates how a high profile weather disaster can provide an opportunity for the emergence of a new dialogue around climate issues focused on issues of harm prevention, property and infrastructure protection, and resilience. Moreover, “[t]he infrastructure concerns that were the focus of the original 2012 petition and the subsequent rate case occur in many places around the United States.”²⁵² Summarizing a general sentiment, one interviewee in our climate litigation work remarked of Superstorm Sandy, “it’s going to change things.”²⁵³ Not only did it have “a lot of elements of climate change to it,” but it also “impacted a huge number of people, and people are worried about the next one now.”²⁵⁴

This section’s example of the Superstorm Sandy response illustrates the many ways in which disasters can create opportunities for politicians’ framing

²⁴⁸ Order Approving Electric, Gas and Steam Rate Plans in Accord with Joint Proposal at 63, Rates, Charges, Rules & Regulations of Consol. Edison Co. of N.Y. for Elec. Serv., No. 13-E-0030 (N.Y. State Pub. Serv. Comm’n Feb. 21, 2014) [hereinafter Order], <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={1714A09D-088F-4343-BF91-8DEA3685A614}>; CONSOL. EDISON CO. OF N.Y., STORM HARDENING AND RESILIENCY COLLABORATIVE REPORT (Dec. 4, 2013), <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E6D76530-61DB-4A71-AFE2-17737A49D124}>. In its Order, the Commission noted that ongoing review of the standard is appropriate “in light of the rapid developments in climate science forecasts, and in federal, state and city policies.” Order, *supra*, at 67.

²⁴⁹ Consol. Edison Co., No. 13-E-0300, at 116–18 (N.Y. Pub. Serv. Comm’n Dec. 31, 2013) (joint proposal), <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={3881B193-8115-4BA0-A01A-B8D373D59726}>.

²⁵⁰ This study is intended to provide a longer-range basis for ongoing review of design standards, such as the FEMA+3 floodproofing standard, and the Commission indicated that it “expect[ed] to revisit this issue.” Order, *supra* note 248, at 67.

²⁵¹ Ethan Strell, *Public Service Commission Approves Con Ed Rate Case and Climate Change Adaptation Settlement*, COLUM. L. SCH.: CLIMATE CHANGE BLOG (Feb. 21, 2014), <http://blogs.law.columbia.edu/climatechange/2014/02/21/public-service-commission-approves-con-ed-rate-case-and-climate-change-adaptation-settlement>.

²⁵² JACQUELINE PEEL & HARI M. OSOFSKY, CLIMATE CHANGE LITIGATION: REGULATORY PATHWAYS TO CLEANER ENERGY 108, 158 (2015).

²⁵³ Interview with Participant 6 (Nov. 14, 2012).

²⁵⁴ *Id.*

or reframing of issues. They can also open windows for policy action—either directly or through forcing litigation—by highlighting the very real and devastating effects on people’s homes, property, lives, and livelihoods that climate change is likely to bring about. Beyond just the Superstorm Sandy context, in the last few years, “building resilience” has become the focus of numerous planning efforts; such efforts, even if they do not mention climate change directly, are often intimately linked to adaptation and, in some cases, also to mitigation.²⁵⁵

Disasters can also see the emergence of new coalitions of actors that have a substantial stake in policy progress; for example, insurance companies and re-insurers are becoming major players in policy debates about disaster preparation and adaptation.²⁵⁶ Moreover, the decisions of these actors can exert a very direct influence on behavior: “[I]f insurance companies won’t write insurance for floodplains, you know, that changes policy.”²⁵⁷

Economic development and disaster resiliency are just two examples of ways in which substantive reframing could move discussions related to energy transition or climate change to areas of greater agreement. From our perspective, the key to progress is not whether people can agree on the problem of climate change or the need for energy transition, but that they take the steps needed to address it. Because there are things that people agree about that also serve mitigation and adaptation goals, reframing issues around those areas of agreement has been and will continue to be an important strategy for progress in the current partisan climate.

III. STRUCTURAL LEVERAGE POINTS FOR MAKING PROGRESS

The previous Part has focused on substantive reframing of actions that contribute to addressing climate change or advancing energy transition. It has argued for the value of moving away from divisive frames that trigger partisan disputes to those where greater social consensus is possible. It is noteworthy, though, that in many of the examples discussed, bipartisan action is being taken outside of the federal congressional setting; the federal executive branch,

²⁵⁵ See Clay Nesler, *Building Resilience: 6 Lessons from Superstorm Sandy*, U.S. GREEN BUILDING COUNCIL (Dec. 20, 2012), <http://www.usgbc.org/articles/building-resilience-6-lessons-superstorm-sandy>; *State and Local Adaptation Plans*, GEO. CLIMATE CTR., <http://www.georgetowncclimate.org/node/3324> (last visited Dec. 30, 2015).

²⁵⁶ See *infra* Part III.C.

²⁵⁷ Interview with Participant 6 (Nov. 14, 2012).

states and their governors, local authorities, courts, and businesses are often the actors taking a lead role. Opportunities for multi-scalar efforts of this kind are a function of the complexity of climate change and energy issues, which can be addressed at a variety of different governance levels by a range of different actors.²⁵⁸ Many of these forums may also be less prone to partisanship than the federal congressional context, or at least less prone to adopt partisan framings of issues.²⁵⁹ *Structural* reframing of climate and energy transition efforts—pursuing pathways “off the beaten track” that tap into different coalitions of stakeholders and institutions—may thus aid policy progress in conjunction with substantive reframing.

The notion of structural reframing is one familiar to the social science literature on organizations and organizational change. In that context, the seminal work by Lee Bolman and Terence Deal on *Reframing Organizations* attempts to simplify organizational complexities and diagnose problems by using a series of frames that allow an organizational observer to view the same situation from a variety of different perspectives. Bolman and Deal assert that “[t]he key to accomplishing something that requires concerted action with other people is to reframe your perception of the situation to take account of the divergent perspectives of the various players.”²⁶⁰ According to Bolman and Deal, one such frame that can be used in seeking to understand organizations is a structural frame. This frame emphasizes organizational architecture, rules, roles, policies, procedures, and lines of authority. Problems viewed through a structural frame are the result of misalignment. In this context, reframing becomes an exercise in determining what structures are necessary to get the job done.

In a similar way, we see structural reframing of climate and energy transition work as an attempt to utilize different sets of institutions, regulatory pathways, and coalitions of actors than the conventional top-down national legislative pathway that faces substantial partisan roadblocks. Some structural reframing strategies focus on government actors, shifting the locus of climate

²⁵⁸ Hari M. Osofsky, *Multiscalar Governance and Climate Change: Reflections on the Role of States and Cities at Copenhagen*, 25 MD. J. INT’L L. 64 (2010); Hari M. Osofsky, *Suburban Climate Change Efforts: Possibilities for Small and Nimble Cities Participating in State, Regional, National, and International Networks*, 22 CORNELL J.L. & PUB. POL’Y 395 (2012) [hereinafter Osofsky, *Suburban Climate Change Efforts*].

²⁵⁹ See Dennis Chong, *Explaining Public Conflict and Consensus on the Climate*, in CHANGING CLIMATE POLITICS 110, 132 (Yael Wolinsky-Nahmias ed., 2015).

²⁶⁰ LEE BOLMAN & TERENCE DEAL, *REFRAMING ORGANIZATIONS* 270 (1997).

action either vertically to a different level of government (e.g., from the federal government to state or local governments), or horizontally to a different branch of government (e.g., from the legislature to the executive branch or courts).²⁶¹ Recognizing that the vast majority of emissions are not created by governments, but rather through the use of products created and sold by private actors such as corporations, other structural reframing strategies focus on non-governmental actors. These strategies aim to influence those private actors directly, rather than just through the governments that regulate them.

The following sections discuss three potential structural leveraging strategies that hold particular promise: (1) scaling down to local levels, (2) shifting across to other branches (executive or judicial) to influence or go around partisan blocks in one branch, and (3) altering focus from policy change to directly changing the behavior of non-governmental actors such as corporations. This Article highlights these three pathways given the lower (though not non-existent) barriers that partisanship generally poses in these contexts, whether this is due to a greater focus on shared community values and needs, executive powers, conventions of judicial independence, or economic bottom lines. We argue that pairing action in these forums with the kinds of substantive reframing strategies described in the previous Part has and can help to promote needed energy transition.

These structural strategies have a more complex relationship to partisanship than the substantive ones do. While substantive reframing focuses on finding issues about which people actually agree, structural reframing includes “going together” and “going around” strategies that emerge in varying combinations over time. Branch shifting—to lawsuits and executive action—particularly exemplifies the mixed quality of structural reframing. Lawsuits often pit the two sides against one another, but sometimes result in moments of cooperation. For example, as discussed in depth below, litigation helped spur the federal government, California, and automobile companies to come together around motor vehicle greenhouse gas regulations.²⁶² Similarly, the Obama Administration’s use of executive authority consists of both the high profile

²⁶¹ Structural leverage points for encouraging regulatory action on energy transition can helpfully be considered by envisioning government on a spatial grid. A vertical axis ranges from the individual to the local to the state to the federal to the international, with interstitial regional levels. A horizontal axis captures the myriad of actors functioning at a particular governmental level; in the U.S. context of separation of powers and checks and balances, that axis includes three branches—executive, legislative, and judicial—and the many different individuals and entities functioning within each branch at a particular level.

²⁶² See *infra* Part III.B.1.

actions that invoke partisan responses, such as the Clean Power Plan and Paris Agreement, and other actions that are relatively uncontroversial.²⁶³ This Part explores these nuances in order to understand the role that structural reframing can play in advancing policy action in a partisan environment.

A. “*Small Is Beautiful*”



This section focuses on vertical reframing, in which advocates shift their focus to a different level of government. In our earlier discussion of substantive reframing, we examined a number of successful bipartisan efforts at the state level; at that scale, action on renewable energy, energy efficiency, and disaster planning at times has been able to move forward even as the Congress remains deadlocked.²⁶⁵ This section augments that discussion by focusing even smaller, on local efforts at energy transition and climate action.

In examining possibilities at the local level, it is important to first note that, independent of structural reframing to address partisanship, local action serves as a crucial component of any holistic strategy to advance energy transition or to respond to climate change. Over half of the world’s population and nearly

²⁶³ See *infra* Part III.B.2.

²⁶⁴ Sidney Harris ©, All rights reserved (Distributed by Artist/Science Cartoons Plus), http://www.sciencecartoonsplus.com/pages/global_warming.php.

²⁶⁵ For a discussion of these federalism dynamics and partisanship, see Jessica Bulman-Pozen, *Partisan Federalism*, 127 HARV. L. REV. 1077 (2014).

82% of the U.S. population live in cities.²⁶⁶ NASA estimates that 70% of global carbon dioxide (CO₂) emissions come from cities.²⁶⁷ Local planning decisions shape energy usage, emissions trajectories, and resiliency.

Moreover, as national action in the United States has often been stymied by partisan divides, many local governments (and states) have chosen to take steps to reduce their greenhouse gas emissions and participate in local, state, national, and international networks of cities working on climate change. For example, 1,060 U.S. mayors have joined the U.S. Mayors Climate Protection Agreement (Mayors Agreement)—pledging to meet what would have been U.S. Kyoto Protocol commitments—representing about 28% of the total U.S. population (though only 5% of cities).²⁶⁸ Leader cities also have met during the last several international negotiations and formed their own agreements on both mitigation and adaptation. For example, at the September 2014 negotiations, the Compact of Mayors was launched:

Mayors from cities around the globe announced an expansion of their commitments to scale up climate resilience efforts, energy efficiency programmes and resilient financing mechanisms, including through an initiative to reduce greenhouse gas (GHG) emissions by 454 megatons by 2020. The Compact of Mayors is comprised of more than 2000 cities.²⁶⁹

However, most crucial for the partisanship concerns that are this Article's focus, cities are not simply important places in which to address energy transition and climate change. They are also a scale at which partisanship is often less intense. Many cities across the United States do not include party affiliation on their election ballots, and local officials, especially in smaller towns, often do not publicly tout their party membership; a 2001 study found that 77% of responding cities held non-partisan elections, reinforcing the

²⁶⁶ See *World Factbook, Urbanization*, U.S. CENTRAL INTELLIGENCE AGENCY, <https://www.cia.gov/library/publications/the-world-factbook/fields/2212.html> (last visited Nov. 27, 2015).

²⁶⁷ *Megacities Carbon Project*, NASA JET PROPULSION LAB., <http://megacities.jpl.nasa.gov/portal/> (last visited Dec. 30, 2015).

²⁶⁸ As of October 24, 2013, 1,060 mayors representing a total population of 88,962,982 citizens had joined the Mayors Agreement. *List of Participating Mayors*, MAYORS CLIMATE PROT. CTR., <http://usmayors.org/climateprotection/list.asp> (last visited Sept. 15, 2015). The Census Bureau estimated the total U.S. population at 316,938,793 on that date. *U.S. and World Population Clock*, U.S. CENSUS, <http://www.census.gov/popclock/> (last visited Oct. 24, 2013).

²⁶⁹ *Compact of Mayors Launched at UN Climate Summit*, INT'L INST. FOR SUSTAINABLE DEV. (Sept. 23, 2014), <http://climate-l.iisd.org/news/compact-of-mayors-launched-at-un-climate-summit/>.

dominance of this trend.²⁷⁰ Scholarly studies of the impact of non-partisan elections have shown what makes sense intuitively: People rely less on party affiliation when the ballot does not indicate it.²⁷¹ In addition, people often know each other personally in communities, which tends to lessen the destructive name-calling and create opportunities for a few motivated people to make a difference.²⁷²

While these qualities of smaller-scale governments and elections make it tempting to just say “small is beautiful,” the on-the-ground reality is more complex. First and perhaps most fundamentally, local governments are not islands. As geographer Kevin Cox has argued, each scale is comprised not only by interactions at that level but also through a myriad of interactions with other levels; in other words, local is not just local, but also has individual, community, state, national, and international dimensions.²⁷³ Moreover, geographer Julie Cidell’s work makes clear that one of the key ways in which every scale is in fact multi-scalar is through the people involved.²⁷⁴ The same people voting in non-partisan local elections are also voting in the very partisan national elections, and with greater turnout when they overlap. The

²⁷⁰ *Partisan vs. Nonpartisan Elections*, NAT’L LEAGUE CITIES, <http://www.nlc.org/build-skills-and-networks/resources/cities-101/city-officials/partisan-vs-nonpartisan-elections>.

²⁷¹ Brian F. Schaffner, Matthew Streb & Gerald Wright, *Teams Without Uniforms: The Nonpartisan Ballot in State and Local Elections*, 54 POL. RES. Q. 7 (2001).

²⁷² The psychology literature often discusses this phenomenon in terms of social capital. See, e.g., Douglas D. Perkins & D. Adam Long, *Neighborhood Sense of Community and Social Capital: A Multi-Level Analysis*, in PSYCHOLOGICAL SENSE OF COMMUNITY: RESEARCH, APPLICATIONS, AND IMPLICATIONS 291, 291–95 (Adrian T. Fisher, Christopher C. Sonn & Brian J. Bishop eds., 2002).

²⁷³ Kevin R. Cox, *Spaces of Dependence, Spaces of Engagement and the Politics of Scale, or: Looking for Local Politics*, 17 POL. GEOGRAPHY 1, 19–21 (1998).

²⁷⁴ Julie Cidell, *The Place of Individuals in the Politics of Scale*, 38 AREA 196, 196–97, 202 (2006). Cidell concludes as follows:

In the literature on the politics of scale, the individual has largely been treated as a separate scale: the site of multiple and conflicting identities, a locus of struggle for political power and control, or an entry point into the sphere of social reproduction. However, jurisdictions and organizations at higher scales are themselves composed of individuals, and therefore consideration needs to be made of the role that individuals play within the politics of scale. . . .

. . . [I]n multi-scalar conflicts . . . individuals *as* scales are not politically powerful . . .

Because individuals are themselves the sites of multiple scales, they can be torn between those scalar identities, sometimes expressed as keeping the professional separate from the personal. . . .

Finally, there is the question of individuals *within* scales. The conflation of the identities of individuals with the identities of their jurisdiction is a common practice.

Id.

people participating in the vitriolic national dialogue, whether directly in politics or through blogs, Facebook, and Twitter, live in particular places.

The partisan divides play out especially clearly at the interface of the local with the national dialogue on climate change. For instance, the mayors that have committed to the Mayors Agreement come from cities that vote Democratic in national elections by a wide margin. Participation patterns in three major metropolitan regions—Atlanta, Chicago, and the Twin Cities—exemplify these trends. All five cities in the Atlanta area to join the Agreement lean Democratic.²⁷⁵ For participating cities for which there was sufficient data to determine partisan leaning in the Chicago area, twenty-three leaned Democratic and five leaned Republican. In the Twin Cities, nineteen leaned Democratic and three leaned Republican, with one of the Democratic ones (Edina) more of a swing city.²⁷⁶ These patterns suggest that partisan divides influence which mayors are willing to commit explicitly to an agreement focused on climate change commitments.

Second, and connected to the first point, the local itself is multiscalar and includes cities, counties, and metropolitan regions that partially overlap. For the largest cities in the United States, the well-known center cities are actually part of metroregions, which have both population and emissions focused in the suburbs. For example, in the Twin Cities, the center cities of Minneapolis and Saint Paul contain only about a quarter of the overall population of the metroregion.²⁷⁷ In considering the possibilities for bipartisan local action on climate change, then, it is important to look beyond just individual cities, as Hari Osofsky has explored in her prior scholarship; in order for major metropolitan areas to reduce their emissions, their suburbs must participate.²⁷⁸

State and metropolitan regional planning entities and multi-level networks of cities—climate focused and not—can play an important role in encouraging more cities to do more.²⁷⁹ The bipartisan participation in Minnesota's

²⁷⁵ Hari M. Osofsky, *Rethinking the Geography of Local Climate Action: Multi-Level Network Participation in Metropolitan Regions*, 2015 UTAH L. REV. 173, 235, 239.

²⁷⁶ For the details of this data, see *id.* at app.

²⁷⁷ As of 2013, the Twin Cities Metropolitan Region's population was 2,951,000; Minneapolis's was 401,000, and St. Paul's was 296,500. The combined population of Minneapolis and St. Paul was therefore 23.6% of the metro region's overall population. METRO. COUNCIL, POPULATION GROWTH ACROSS THE REGION: THE TWIN CITIES IN 2013, at 3 (2014), <http://metro council.org/getattachment/b09e532c-ca54-4452-b913-34116bfec037/>.aspx.

²⁷⁸ *Id.*; see Osofsky, *supra* note 275; Osofsky, *Suburban Climate Change Efforts*, *supra* note 258.

²⁷⁹ Osofsky, *Suburban Climate Change Efforts*, *supra* note 258.

Greenstep Cities program illustrates the possibilities for practical, constructive action by suburban cities. Minnesota Greenstep Cities emerged from a 2008 legislative order directing the Minnesota Pollution Control Agency, Department of Energy Resources, and Minnesota Clean Energy Resource Teams' to recommend voluntary actions that cities could take as part of a program to recognize "green star" sustainable cities.²⁸⁰ The program launched in June 2010 and provides cities with three "steps" that they can reach depending on how many of the twenty-eight best practices participating cities take.²⁸¹ The program is not simply governmentally based; a number of nongovernmental organizations are involved in the steering committee, and businesses and other organizations can sponsor GreenStep Cities Awards and receive public recognition for their role in the program.²⁸² The program is growing rapidly, with ninety-one cities as of January 2016 and new cities continuing to join.²⁸³

From the start, the program has not had as heavy a Democratic participation bias as the Mayors Agreement, perhaps in part because the program is explicitly framed as a sustainability program rather than a climate change one. Of the first twelve cities to join GreenStep cities, four leaned Republican and one was a swing city, and all were suburbs in the Twin Cities metroregion.²⁸⁴ Moreover, some of those Republican-leaning cities had a history of making explicit commitments on climate change and had even received national recognition for this work.²⁸⁵ Although the numbers have not stayed as equal as the program has grown, they still remain more balanced than metro area Mayors Agreement participation: eighteen Democratic, eight Republican, and one swing city in the Twin Cities as of August 2014.²⁸⁶

The local context also illustrates the ways in which substantive and structural reframing can be paired. While localities are taking a variety of steps within their authority relevant to energy transition and climate change, initiatives framed around economic development and disaster resiliency have a greater likelihood of being politically palatable across the political spectrum.

²⁸⁰ *The Minnesota Green Step Cities Program: History and Development*, MINN. GREENSTEP CITIES, <http://greenstep.pca.state.mn.us/aboutProgram.cfm> (last visited Sept. 16, 2015).

²⁸¹ *Id.*

²⁸² *Id.*

²⁸³ *Greenstep Cities List*, MINN. GREENSTEP CITIES, <http://greenstep.pca.state.mn.us/allCities.cfm> (last visited Jan. 13, 2016); MINN. GREENSTEP CITIES, <http://greenstep.pca.state.mn.us/> (last visited Jan. 13, 2016).

²⁸⁴ Osofsky, *Suburban Climate Change Efforts*, *supra* note 258, at 400, 416, 442–43.

²⁸⁵ *Id.* at 416 tbl.1, 442 tbl.2.

²⁸⁶ Osofsky, *supra* note 275, at app.

Or, as a director of one network of cities confidentially put it, “If you frame it as a purely environmental [thing], that’s the kiss of death.”²⁸⁷

However, as at larger scales, this framing must be grounded in reality. Measuring progress in some objective and tangible way is helpful. For example, a number of Minnesota cities are participating in the Regional Indicators Initiative (RII), which tracks community greenhouse gas emissions and the effectiveness of reduction measures. Falcon Heights Mayor Peter Lindstrom explained the importance of such tracking:

I think the worst thing any city can do is greenwashing—to say you’re making a difference but then not really making a difference at all So through the Regional Indicators Initiative, it’s going to tell us whether our programs are making a difference.²⁸⁸

One of the problems, of course, is that there are so many different measurement systems, and not enough consistency in which systems cities use right now. Hari Osofsky has explored elsewhere the need for multi-level networks of cities on climate change to harmonize—or at least coordinate—their toolkits and modeling more to increase their effectiveness.²⁸⁹ At a global scale, the Compact of Mayors, launched in 2014 at the United Nations Summit, is working to standardize measurement and reporting, though as of December 2015, only 431 cities representing 5.21% of the global population have signed on. Participation rates need to be higher for the Compact of Mayors to achieve these goals.²⁹⁰

However, measurement questions aside, what makes economic development framing particularly promising at a local level is that many energy efficiency, renewable energy, and land use efforts can pay off very quickly and then bring savings.²⁹¹ Often, these economic and energy benefits come in small and not very glamorous forms. Yet if they can be scaled up—so that many places do them—the savings, both in money and emissions, add

²⁸⁷ Notes of Hari Osofsky from Pushing the Envelope on Sustainability and Energy Use Roundtable (Oct. 6, 2014) [hereinafter Roundtable] (on file with authors).

²⁸⁸ Elizabeth Dunbar, *Energy Use Data Could Help Minnesota Cities Protect the Environment*, MPR NEWS (June 16, 2014), <http://www.mprnews.org/story/2014/06/16/minnesota-environment-data>.

²⁸⁹ See *supra* note 258.

²⁹⁰ COMPACT OF MAYORS, <http://www.compactofmayors.org/> (last visited Dec. 19, 2015).

²⁹¹ For a discussion of cost savings through local energy efficiency efforts, see, for example, *Residential Energy Efficiency*, U.S. ENVTL. PROT. AGENCY, <http://www3.epa.gov/statelocalclimate/local/topics/residential.html>.

up.²⁹² For example, moderately Republican Twin Cities suburb Eden Prairie, a developed second ring job center,²⁹³ was awarded an honorable mention at the 2011 U.S. Mayors Climate Protection Awards in the “small city” category for its “20-40-15” initiative.²⁹⁴ This initiative, which started in 2006, set the target of a 20% increase in city facility energy efficiency and a 40% increase in city vehicle fleet fuel efficiency by the year 2015.²⁹⁵

By June 2011, Eden Prairie had made measurable progress toward those goals, reporting that it had reduced city facility energy consumption by over 8% and increased city fleet fuel efficiency by 10%.²⁹⁶ The city’s energy efficiency initiatives have included motion sensor and LED lighting and stoplights, as well as a City Center energy management system.²⁹⁷ It has improved fuel efficiency by adding several fuel-efficient vehicles to its fleet.²⁹⁸ The city also participates in programs with Centerpoint and Xcel Energy that provide it with rebates.²⁹⁹

These kinds of efficiency measures taken by Eden Prairie have been adopted by many Democratic and Republican leaning cities simply because they make economic sense; when cities use less electricity and fuel, their bills go down. Many examples of this kind of low-hanging fruit exist across local government functions, at city, county, and metroregional scales. For instance, the Twin Cities metropolitan region brought down its wastewater treatment

²⁹² See *id.*

²⁹³ “Developed job centers are not simply relatively affluent bedroom communities within commuting distance of central cities, but rather have become important players in their regional economies. They have comparatively large tax bases but support less of the social costs of poverty than their central cities.” Osofsky, *Suburban Climate Change Efforts*, *supra* note 258, at 423 (first citing MYRON ORFIELD, *AMERICAN METROPOLITICS: THE NEW SUBURBAN REALITY* 44–46 (2002); and then citing MYRON ORFIELD & THOMAS F. LUCE JR., *REGION: PLANNING THE FUTURE OF THE TWIN CITIES* 46 (2010)).

²⁹⁴ See MAYORS CLIMATE PROT. CTR., *TAKING LOCAL ACTION: MAYORS AND CLIMATE PROTECTION BEST PRACTICES* 13 (2011), <http://usmayors.org/79thAnnualMeeting/documents/BestPractices2011ClimateAwardWinners.pdf>; see also *20-40-15 Initiative*, EDEN PRAIRIE, <http://www.edenprairie.org/community/living-green/20-40-15-initiative> (last visited Oct. 6, 2011) (discussing implementation of the plan).

²⁹⁵ *20-40-15 Initiative*, *supra* note 294.

²⁹⁶ Press Release, Eden Prairie, Mayor Receives Honorable Mention for Eden Prairie Climate Protection Efforts (June 17, 2011), <http://www.edenprairie.org/home/showdocument?id=1022>.

²⁹⁷ *City of Eden Prairie*, MINN. GREENSTEP CITIES, http://greenstep.pca.state.mn.us/cityInfo.cfm?ctu_code=2394614 (last visited Oct. 6, 2011).

²⁹⁸ See *id.*; Leah Shaffer, *On the Road to a More Efficient Fleet*, EDEN PRAIRIE NEWS (May 12, 2010, 1:35 PM), http://www.swnewsmedia.com/eden_prairie_news/news/on-the-road-to-a-more-efficient-fleet/article_681470fa-b038-52a4-8445-d91c2db74bd1.html.

²⁹⁹ *Utility Companies*, EDEN PRAIRIE, <http://www.edenprairie.org/community/about-eden-prairie/utility-companies> (listing the utility companies Eden Prairie does business with, including Xcel and Centerpoint) (last visited Sept. 9, 2015).

costs significantly and saved energy in the process through implementing a new aeration approach in Saint Paul.³⁰⁰

Similar opportunities exist with respect to disaster resilience at a local scale, and at times they take the form of collaboration among federal, state, and local governments. President Obama's November 2013 Climate Action Plan established a State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience.³⁰¹ Republican Mayor James Brainard of Carmel, Indiana serves on the taskforce and has conveyed a bipartisan message about its focus: "We need to work on bipartisan solutions, and put politics aside The climate is changing, and we need to be prepared for it."³⁰² He specifically has framed the need for this kind of planning by talking about the crippling drought that Midwestern farmers faced that year. He explained the local emphasis on addressing these kinds of problems rather than engaging in debates over climate change science: "A lot of people debate why the climate is changing That's not important. Mayors are very practical people, so the real question is, what are we going to do about it?"³⁰³

Of course, these planning decisions at times become contentious, which only sometimes relates to partisan differences. For example, we have written elsewhere about emerging U.S. climate change adaptation litigation, most of which is focused at state or local levels.³⁰⁴ At times, the suits are brought by pro-regulatory individuals or entities that are trying to push for greater adaptation. In other instances, pro- or anti-regulatory advocates intervene in pending suits; one set of interveners in a broader lawsuit about sewage planning, for instance, argued that Miami-Dade county's approach violates the Clean Water Act because it fails to address sea level rise and other impacts of climate change.³⁰⁵ Others are brought by those impacted by the adaptation efforts, such as a takings suit brought by homeowners affected when the

³⁰⁰ Minn. Tech. Assistance Program, *MCES Improves Aeration Process to Reduce Energy Use*, UNIV. OF MINN., <http://www.mntap.umn.edu/potw/resources/151.MCES.html> (last modified Sept. 13, 2012); Roundtable, *supra* note 287.

³⁰¹ *Id.*

³⁰² Tim McDonnell, *Why This Red-State Republican Mayor Backs Obama on Climate Change*, MOTHER JONES (Nov. 1, 2013, 5:04 PM), <http://www.motherjones.com/blue-marble/2013/11/what-you-need-know-about-obamas-new-climate-order>.

³⁰³ *Id.*; see also MINN. GREENSTEP CITIES, <http://greenstep.pca.state.mn.us/bestPractices.cfm> (last visited Nov. 28, 2015).

³⁰⁴ Peel & Osofsky, *supra* note 237.

³⁰⁵ Complaint in Intervention at 7, *United States v. Miami-Dade County*, No. 12-24400-FAM (S.D. Fla. June 25, 2013).

Borough of Harvey Cedars built a dune to serve as a barrier wall.³⁰⁶ The New Jersey Supreme Court in that case held that the just compensation calculation should take the protective effects of the dune into account, which ultimately resulted in the plaintiffs receiving \$1 instead of \$375,000.³⁰⁷

Beyond the litigation context, there are partisan policy debates at state and local levels over the value of adaptation. One of the most prominent examples is when North Carolina banned the use of sea level rise data in coastal planning in 2012.³⁰⁸ But there are many other examples of when localities, often in conjunction with statewide adaptation planning efforts, take steps to address impacts that they are experiencing, sometimes calling it climate change and at other times simply focusing on the impact itself.³⁰⁹

The key point here is that the combination of the less partisan environment that many localities provide with the practical economic and resiliency benefits of mitigation and adaptation measures means that local governments can often be encouraged to take action in circumstances where partisan divides prevent larger scale progress. Of course, focusing on the local, and pairing it with substantive reframing, will not serve as a panacea to partisanship. People do sometimes fight in partisan terms about local land use planning decisions. But scaling down helps bring these issues into potentially less contentious fora, which in many instances helps to avoid the kind of partisan gridlock that Congress exhibits.

B. *“Beauty Is in the Eye of the Beholder”*

While scaling down to focus on local governments both addresses a large segment of emissions and provides opportunities for bipartisan agreement, some aspects of climate change and energy transition need to be addressed at larger scales. One strategy for doing so despite imbedded partisanship has been to shift branches. In the years of the George W. Bush Administration when executive action on climate change was not forthcoming, many environmental

³⁰⁶ Borough of Harvey Cedars v. Karan, 70 A.3d 524 (N.J. 2013).

³⁰⁷ *Id.*

³⁰⁸ Alon Harish, *New Law in North Carolina Bans Latest Scientific Predictions of Sea-Level Rise*, ABC NEWS (Aug. 2, 2012), <http://abcnews.go.com/US/north-carolina-bans-latest-science-rising-sea-level/story?id=16913782>.

³⁰⁹ See, e.g., *Delaware Climate and Energy Profile*, GEO. L. CTR., <http://www.georgetownclimate.org/adaptation/state-information/overview-of-delawares-climate-change-preparations> (last visited Sept. 30, 2015); *New Jersey Climate and Energy Profile*, GEO. L. CTR., <http://www.georgetownclimate.org/adaptation/state-information/overview-of-new-jerseys-climate-change-preparations> (last visited Sept. 30, 2015).

advocates sought to use the courts to force regulatory progress or to create independent action.³¹⁰ More recently, under the Obama Administration, the President has supported action but faced a Congress in which climate change legislation did not pass and climate change treaties will not be ratified.³¹¹ President Obama's use of executive authority to advance mitigation and adaptation measures, at times relying on court decisions for justification, includes both branch shifting to get around a gridlocked Congress and less controversial measures about which there is broader agreement.³¹² In this section, we focus on the role that separation of powers and checks and balances among branches have played in advancing U.S. energy transition.

I. "The Devil Made Me Do It"



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Litigation has long served as a means for forcing, or attempting to block, action by other branches to address important social issues in the U.S. regulatory landscape. Climate change and energy transition have not been exceptions.³¹⁴ While climate change litigation emerged in the United States in

³¹⁰ For an analysis of that period, see Hari M. Osofsky, *Is Climate Change "International"?: Litigation's Diagonal Regulatory Role*, 49 VA. J. INT'L L. 585 (2009).

³¹¹ For an analysis of the Obama Administration's legislative barriers and early initiatives, see Hari M. Osofsky, *Diagonal Federalism and Climate Change: Implications for the Obama Administration*, 62 ALA. L. REV. 237 (2011).

³¹² For an exploration of the role of agencies and courts in advancing regulatory policy when Congress is gridlocked, see Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 U. PENN. L. REV. 1 (2014).

³¹³ Henry Payne. All rights reserved. © (Distributed by Universal iclick), http://www.classicalvalues.com/archives/2007/04/post_294.html.

³¹⁴ PEEL & OSOFSKY, *supra* note 252, at 266, 298.

the 1990s,³¹⁵ it really began to take hold during the presidency of George W. Bush when the executive branch refused to take action and Congress lacked adequate consensus to move forward.³¹⁶ The Supreme Court's 2007 decision in *Massachusetts v. EPA*³¹⁷—finding that the EPA had abused its discretion in the way in which it justified not regulating motor vehicle greenhouse gas emissions under the Clean Air Act³¹⁸—served as an important turning point in the possibilities for litigation as a key leverage point. This decision has since played a significant role in shaping the U.S. regulatory landscape on climate change and clean energy. As we discuss in depth in the following section, the Obama Administration has used that case to justify actions to regulate both vehicles and stationary sources like power plants under Clean Air Act but also more recently has faced setbacks from the Supreme Court staying the centerpiece to those regulatory efforts in response to litigation. But *Massachusetts v. EPA* also more broadly reinforced the courts as a forum for influencing other branches. At this point, there have been several hundred cases involving climate change mitigation in some way, in both state and federal courts, and an emerging set of lawsuits addressing adaptation issues.³¹⁹

In a divisive partisan environment, court rulings endorsing climate action can serve as a gridlock breaker, allowing regulation to move forward that might not otherwise have been politically possible. High profile climate cases calling on governments to act can provide political cover for willing regulators in the executive branch to make progress despite obstacles. Action in such cases is often framed as being compelled by the court decision. Unlike the vertical structural reframing strategy described in the previous section, the turn to courts is not usually coupled with a substantive reframing of climate change issues by litigants (although in some cases petitioners are beginning to use this approach, for example, by casting action on emissions as an environmental justice issue for low income communities of color,³²⁰ as an element of building

³¹⁵ *City of Los Angeles v. Nat'l Highway Traffic Safety Admin.*, 912 F.2d 478 (D.C. Cir. 1990).

³¹⁶ Dave Markell & J.B. Ruhl, *An Empirical Assessment of Climate Change in the Courts: A New Jurisprudence or Business as Usual?*, 64 FLA. L. REV. 15 (2012).

³¹⁷ 549 U.S. 497 (2007).

³¹⁸ *Id.* at 533–35.

³¹⁹ A comprehensive database of climate change cases filed and decided in U.S. courts, including links to judgments, is maintained by the Columbia Climate Change Law Center. See MICHAEL B. GERRARD, J. CULLEN HOWE & L. MARGARET BARRY, ARNOLD & PORTER LLP, CLIMATE CHANGE LITIGATION IN THE U.S., <http://www.climatecasechart.com> (last modified Dec. 7, 2015).

³²⁰ Cases brought by Communities for a Better Environment together with other NGOs over adverse health impacts of vehicle pollutants like carbon monoxide that also contribute to climate change exemplify this

disaster resilience,³²¹ or as part of an approach to improve corporate climate risk disclosure).³²²

Given the constitutionally based status of federal courts and valuing of judicial independence in all U.S. courts, a litigation strategy has the advantage of giving legitimacy—as well as a degree of perceived non-partisanship—to both the climate change problem and the need for action to address it. As one litigant interviewee explained,

[I]n this country, as much as we sometimes ridicule and complain about them, we do tend to have high regard for courts, especially federal courts and most especially the Supreme Court, notwithstanding all the hits that it has taken, from right and left, and there is this degree to which having court decisions that take this problem seriously . . . causes everybody to perk up and take notice.³²³

However, in exploring the possibilities for litigation as a mechanism for leverage in a partisan environment, it is important to acknowledge that courts are not a panacea to partisanship and that the dynamics around litigation and partisanship are complex. As discussed in Part I, many key stakeholders have deeply entrenched views on climate change, which litigation is unlikely to alter significantly.³²⁴ In addition, partisanship influences the ways in which those in other branches respond to lawsuits, and the reactions to those responses. While some regulators may remain hostile to moving forward even in the face of judicial and broader public support for climate action, others will be bolstered by positive court rulings paired with supportive public opinion to push harder in their efforts to regulate climate change. When public opinion on climate change is more ambivalent or divided, regulators may either resist action

approach. See *Current Cases and Campaigns: Air Quality*, COMMUNITIES FOR BETTER ENV'T, <http://www.cbecal.org/legal/current-cases-2/>.

³²¹ The petition to the New York Public Services Commission exemplifies such an approach. See *supra* notes 245–52 and accompanying text.

³²² See Cal. Pub. Emps. Retirement Sys. et al., Petition for Interpretive Guidance on Climate Risk Disclosure, at 19 (2007), <http://www.sec.gov/rules/petitions/2007/petn4-547.pdf>; British Columbia Investment Management Corporation et al., Supplemental Petition for Interpretive Guidance on Climate Risk Disclosure, at 2 (2008), <http://www.sec.gov/rules/petitions/2008/petn4-547-supp.pdf>; Second Supplemental Petition for Interpretive Guidance on Climate Risk Disclosure, File No. 4-547 (Nov. 23, 2009), <http://www.sec.gov/rules/petitions/2009/petn4-547-supp.pdf>. For other petitions on point, see Steven J. Milloy & Thomas J. Borelli, Free Enter. Action Fund, Petition for Interpretive Guidance on Business Risk of Global Warming Regulation (2007), <http://www.sec.gov/rules/petitions/2007/petn4-549.pdf>; *infra* note 448.

³²³ Telephone Interview with Participant 8 (Nov. 26, 2012).

³²⁴ Kahan, *supra* note 23.

despite the court decision or derive comfort from judgments that mandate action that would otherwise be politically difficult to undertake.

This section attempts to capture these complexities. As the examples it explores illustrate, the combination of partisan politics and entrenched viewpoints mean that litigation and the public reaction to court cases may not be enough to bolster a proactive regulator or force action by a reluctant one. Those opposing regulation often will not accept litigation-based justifications, and hostile regulators sometimes resist decisions requiring them to act.

For regulators who are proactive in addressing climate change, litigation brought by industry or other challengers can often act as a restraint on regulatory initiatives or at least slow down the process of regulatory development. On occasion, however, proactive regulators also use climate change cases as a justification for and legitimation of a policy approach the administration or agency wants to undertake, particularly where this course carries political risks.³²⁵ Court decisions can confer legitimacy for action by allowing regulators to represent that their actions are founded on a legal base and are mandated by the courts.³²⁶ In effect, litigation can provide “cover” for regulators who are willing to act but feel concerned about the political consequences.

The dispute over what action the decision in *Massachusetts* required provides a helpful illustration of these dynamics. After the Obama Administration failed to pass comprehensive climate change legislation,³²⁷ the President used his executive branch authority to direct climate regulatory measures under the Clean Air Act—discussed further below—by relying explicitly on the Supreme Court’s *Massachusetts* decision to justify his action.³²⁸ Partisan divisions also have framed how other politicians have reacted to this justification. Many Democrats have argued that the decision required the president to act while numerous Republicans deny that

³²⁵ Bradley C. Canon, *Studying Bureaucratic Implementation of Judicial Policies in the United States: Conceptual and Methodological Approaches*, in JUDICIAL REVIEW AND BUREAUCRATIC IMPACT: INTERNATIONAL AND INTERDISCIPLINARY PERSPECTIVES 80 (Marc Hertogh & Simon Halliday eds., 2004).

³²⁶ Maurice Sunkin, *Conceptual Issues in Researching the Impact of Judicial Review on Government Bureaucracies*, in JUDICIAL REVIEW AND BUREAUCRATIC IMPACT: INTERNATIONAL AND INTERDISCIPLINARY PERSPECTIVES, *supra* note 325, at 43, 53.

³²⁷ American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (2009).

³²⁸ Memorandum from President Barack Obama to the Secretary of Transportation and the Administrator of the National Highway Traffic Safety Administration (Jan. 26, 2009), http://www.whitehouse.gov/the_press_office/Presidential_Memorandum_fuel_economy/.

justification.³²⁹ Senator Diane Feinstein (D-Cal.) stated, “I believe EPA has to act under the Massachusetts case.”³³⁰ In contrast, Senator John Barrasso (R-Wyo.), author of unsuccessful legislation that would have stripped the EPA authority to regulate greenhouse gas emissions, contended, “The Supreme Court gave EPA permission to act, but it did not mandate it to act . . . I think EPA is overstepping what it should be doing in terms of impacting Americans’ ability to compete globally.”³³¹ While the decision thus gave President Obama a basis for justifying his actions both legally and politically, those opposed to his actions often did not accept that justification.³³²

As the example of President Obama’s greenhouse gas regulations illustrates, willing regulators may use a climate change opinion to legitimize, justify, or enable regulatory action. However, anti-regulatory officials do not welcome such opinions and may seek to minimize compliance or forgo it altogether.³³³ Although they cannot ignore direct edicts requiring them to act, they can delay their response or minimize the action that they take to comply. A comparison of the George W. Bush and Obama Administrations’ regulatory response to *Massachusetts* illustrates this point. The Bush Administration’s response to the same opinion that the Obama Administration used to justify action was limited, despite public claims of compliance, reflecting its continued hostility to this federal regulatory approach.

In making these comparisons, though, it is important to acknowledge the complex nature of organizations. Regulatory entities are not monolithic but rather are comprised of individuals who may vary in their views and interaction with partisan debates, even within a particular administration. As one interviewee pointed out, when *Massachusetts* came down, “the career staff” at EPA favored using the Clean Air Act to address greenhouse gas pollution while Bush Administration appointees who made up “the political staff” reacted oppositely, stressing the need for congressional rather than agency action.³³⁴ Ultimately, only when the political and professional

³²⁹ Lawrence Hurely & Elana Schor, *Congress Emits Half-Truths in Spin War Over Mass. v. EPA*, N.Y. TIMES (Mar. 17, 2011), <http://www.nytimes.com/gwire/2011/03/17/17greenwire-congress-emits-half-truths-in-spin-war-over-im-12380.html>.

³³⁰ *Id.*

³³¹ *Id.*

³³² For examples of the partisan interchange, see *id.*

³³³ Canon, *supra* note 325, at 81.

³³⁴ Telephone Interview with Participant 9, *supra* note 17.

personnel aligned under the Obama Administration could EPA action proceed.³³⁵

Of course, courts themselves—despite protections of judicial independence—are at times not entirely non-partisan actors. In the judicial appointment process, candidates are screened for partisan views that can lead to left-leaning or right-leaning nominees depending on the administration in power. This partisan appointment process sometimes correlates to how climate change cases fare before the courts, a reality well-recognized by litigants:

I've yet to encounter an Obama appointed or a Clinton appointed judge who doesn't understand that climate change is real. They very well may not appreciate the severity of it, they may think that the appropriate role of the courts is very narrow and that it is a question for the Congress and the President, not the courts to deal with, but they are clearly aware of the problem. Versus there is still a large subset of the American judiciary that either actually or at least ideologically takes a position that climate change is not real or not established or uncertain or otherwise not something to be dealt with. And those judges are not particularly friendly to climate litigation.³³⁶

Moreover, at times, opinions—both in the language that they use or in their treatment of climate science—have paralleled the broader political debates, whether or not the judges were intending to enter the partisan fray. The Supreme Court's June 2014 decision in *Utility Air Regulatory Group v. EPA*—the third time the U.S. Supreme Court directly focused on climate change—provides an interesting example of the contentious language that dominates legislative and media dialogue entering a judicial opinion.³³⁷ The Court partially upheld and partially struck down EPA's approach to regulating greenhouse gas emissions from stationary sources under the Clean Air Act in a manner that largely allowed the EPA to proceed. Justice Scalia's opinion—most relevant to dynamics among partisanship, litigation as political cover, and inter-branch dynamics—used strong language decrying the EPA's overstepping of its authority:

[I]n EPA's assertion of that authority, we confront a singular situation: an agency laying claim to extravagant statutory power over the national economy while at the same time strenuously asserting that the authority claimed would render the statute "unrecognizable to

³³⁵ *Id.*

³³⁶ Telephone Interview with Participant 12 (Dec. 2, 2013).

³³⁷ 134 S. Ct. 2427 (2014).

the Congress that designed” it. . . . Since, as we hold above, the statute does not compel EPA’s interpretation, it would be patently unreasonable—not to say outrageous—for EPA to insist on seizing expansive power that it admits the statute is not designed to grant.³³⁸

Although Justice Scalia may not have had any sort of partisan intent in the tone of the opinion—he often writes opinions with colorful language—the wording parallels that of federal legislators opposed to President Obama’s approach.

These partisan dynamics around climate change do not simply manifest in disputes over how regulators should respond to cases. Rather, the courtrooms themselves become important public stages for debates over the science and impacts of climate change. The shift over time in how the Supreme Court treated climate change science, which we have explored in more depth elsewhere, exemplifies these complicated dynamics. Although the Court did not rule on climate change science directly in *Massachusetts*, it treated the science as having legitimacy. For example, the Court concluded its standing analysis as follows:

In sum—at least according to petitioners’ uncontested affidavits—the rise in sea levels associated with global warming has already harmed and will continue to harm Massachusetts. The risk of catastrophic harm, though remote, is nevertheless real. That risk would be reduced to some extent if petitioners received the relief they seek. We therefore hold that petitioners have standing to challenge EPA’s denial of their rulemaking petition.³³⁹

This acknowledgment of climate change by the nation’s highest court had an important impact on the public dialogue. The “massive public and professional attention” drawn by the case³⁴⁰ has been a conduit for this view to reverberate throughout subsequent public and political debate on climate change.

However, as influential as *Massachusetts* was and continues to be, one strong opinion—even a landmark U.S. Supreme Court opinion—faces limits in its ability to reshape public perceptions in a partisan environment. Opinions are issued in a broader context in which many other political, media, new media, and even judicial statements also matter. And judges and the courts that they sit on are not completely immune to the societies in which they live no matter

³³⁸ *Id.* at 2444 (footnotes omitted).

³³⁹ *Massachusetts v. EPA*, 549 U.S. 497, 526 (2007).

³⁴⁰ Jody Freeman & Adrian Vermule, *Massachusetts v. EPA: From Politics to Expertise*, 2007 SUP. CT. REV. 51, 51.

how much they strive for independence. A mere four years after *Massachusetts*, in *American Electrical Power Co. v. Connecticut (AEP)* the Court treated climate science much differently, an important reminder that these conversations remain evolutionary. Professor Maxine Burkett explained,

[T]he *AEP* Court takes time in its relatively slender decision to inject doubt about elements of climate science. Abandoning the confidence demonstrated in *Massachusetts v. EPA*, the Court cites to a magazine article expressing doubt about climate change impacts as a counterweight to the voluminous peer-reviewed articles on which the EPA based its findings. Further, the Court pauses again to make a facile indictment of all breathing, sentient beings. In an instant, it dismisses the relative excess with which some have burned carbon for luxury and profit versus those who have for food and shelter.³⁴¹

Regardless of whether the Supreme Court's treatment of science in *AEP* was influenced by shifting public attitudes towards climate change, its discussion of the science evolved in parallel with those attitudes.

Moreover, *AEP* did not simply address the substance of climate science but also concerns about courts as appropriate arbiters of the scientific debates. The Court explained that “[f]ederal judges lack the scientific, economic, and technological resources an agency can utilize in coping with issues of this order” and then described specific mechanisms that agencies have but courts lack.³⁴² The Court's concern is not new. This language, for example, parallels Justice Scalia's comment in the *Massachusetts* oral argument: “I told you before I'm not a scientist. . . . That's why I don't want to deal with global warming, to tell you the truth.”³⁴³ But the combination of more skepticism about climate change science and about the Court's role in assessing it constitutes a substantial step back from *Massachusetts*.³⁴⁴

³⁴¹ Maxine Burkett, *Climate Justice and the Elusive Climate Tort*, 121 YALE L.J. ONLINE 115, 118 (2011), <http://www.yalelawjournal.org/forum/climate-justice-and-the-elusive-climate-tort>.

³⁴² *Am. Elec. Power Co. v. Connecticut*, 131 S. Ct. 2531, 2539–40 (2011).

³⁴³ Transcript of Oral Argument at 12–13, *Massachusetts v. EPA*, 549 U.S. 497 (2007), 2006 WL 3431932, at *12–13; see also Hari M. Osofsky, *The Intersection of Scale, Science, and Law*, in *Massachusetts v. EPA*, 9 OR. REV. INT'L L. 233 (2007).

³⁴⁴ This step back has taken place in a broader context in which the Supreme Court has become more pro-business. Lee Epstein, William Landes, and Richard Posner have conducted an empirical study which concludes that

[w]hether measured by decisions or Justices' votes, a plunge in warmth toward business during the 1960s (the heyday of the Warren Court) was quickly reversed; and the Roberts Court is much friendlier to business than either the Burger or Rehnquist Courts, which preceded it, were. The Court is taking more cases in which the business litigant lost in the lower court and reversing

Together, the ways in which regulators use these opinions and the evolution that they represent reinforce the complex interaction between partisanship and litigation. The U.S. Supreme Court and other courts have provided forums where pro- and anti-regulatory forces can contribute to often-partisan interactions about science and regulation. Briefs, oral arguments, and opinions, especially in the Supreme Court, are well publicized and function as vehicles for high-profile debates over these issues. This respected body's articulation of views on climate science and regulation influences partisan discourse, but that discourse in turn comes through in the documents filed with and opinions articulated by this Court.³⁴⁵

As with the other strategies we have described, using the courts to advance policy on climate change and to foster energy transition has its limits, dictated in part by the broader environment in which cases take place. The Supreme Court's February 2016 stay of the Clean Power Plan, described in the following section, dramatically reinforced the ways in which court decision can constrain regulatory efforts. Even so, litigation remains a worthwhile complement to other strategies and an important component of the iterative evolution of policy over time.³⁴⁶ In part, courts represent another forum in which partisan debates can take place in the face of gridlock. As one environmental litigator that we interviewed put it,

[A] lot of this stuff is born of, less of the sense that litigation is the optimal strategy and more of the sense that at least courtroom doors are open and if you think you can put together some good arguments you can get a court to do something whereas a legislature, this Congress, is difficult.³⁴⁷

more of these—giving rise to the paradox that a decision in which certiorari is granted when the lower court decision was anti-business is more likely to be reversed than one in which the lower court decision was pro-business. The Roberts Court also has affirmed more cases in which business is the respondent than its predecessor Courts did.

Lee Epstein, William M. Landes & Richard A. Posner, *How Business Fares in the Supreme Court*, 97 MINN. L. REV. 1431, 1472 (2013).

³⁴⁵ These debates over climate change science form part of broader legal and political dynamics around science. For analyses of these dynamics, see *RESCUING SCIENCE FROM POLITICS: REGULATION AND THE DISTORTION OF SCIENTIFIC RESEARCH* (Wendy Wagner & Rena Steinzor eds., 2006); Holly Doremus & A. Dan Tarlock, *Science, Judgment, and Controversy in Natural Resource Regulation*, 26 PUB. LAND & RESOURCES L. REV. 1 (2005); Holly Doremus, *Science Plays Defense: Natural Resource Management in the Bush Administration*, 32 ECOLOGY L.Q. 249 (2005).

³⁴⁶ Ann E. Carlson, *Iterative Federalism and Climate Change*, 103 NW. U. L. REV. 1097 (2009); Osofsky, *supra* note 310; Osofsky, *supra* note 311.

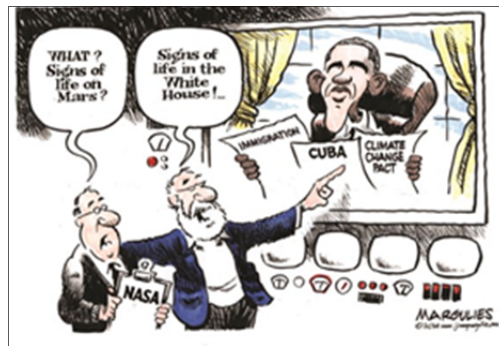
³⁴⁷ Telephone Interview with Participant 8, *supra* note 323.

Moreover, shifting branches to the courts provides important advantages beyond just an available forum. Namely, the partisan barriers are not as overt; court processes facilitate transparency, debate, and deliberation; and positive decisions can move the law forward. These qualities make litigation an important place for advancing change in a partisan environment, even if it often fails to mitigate the partisanship itself.

2. “If Congress Won’t Act, I Will”³⁴⁸



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³⁴⁸ Obama: ‘If Congress Won’t Act, I Will,’ ABC NEWS (Oct. 29, 2011), <http://abcnews.go.com/Politics/video/obama-congress-wont-act-14841368>.

³⁴⁹ © A.F. Branco, CONSERVATIVE DAILY NEWS (2012), <http://www.climatechangedispatch.com/images/pics6/cartoon-obama-dictator.jpg>.

³⁵⁰ © Jim Margulies. All rights reserved. Distributed by Cagle Political Cartoons (2014), http://media.cagle.com/46/2014/12/23/157855_600.jpg.

Although the courts serve as an important forum and impetus in a partisan environment, the previous discussion illustrates that the executive's view on climate change action and use of authority also deeply impact possibilities for progress in a partisan environment. A reluctant regulator like President George W. Bush and his appointees limited climate change action in a variety of ways, even when pushed by litigation, while President Obama has relied on executive authority throughout his presidency.³⁵¹ At times, and most controversially, the Obama Administration has used executive power as a form of branch shifting that allows him to "go around" a gridlocked Congress.³⁵²

However, representing all of the Obama Administration's executive action in that manner would be a vast oversimplification. Some of the Administration's actions, particularly on adaptation, are far less controversial. And even the Administration's mitigation regulations have invoked varying partisan reactions. The power plant regulations are far more controversial than the motor vehicle ones, in part because the automobile industry is relatively neutral about vehicle specifications so long as it makes money from them and can operate under clear national standards. This section examines how executive authority, at times operating in conjunction with litigation, has interacted with partisanship during the Obama Administration.

In the early days of the Obama Administration, many expressed optimism that climate policy was entering a new era both domestically and internationally. The subsequent failure of cap-and-trade legislation despite strong Democratic majorities in Congress and the collapse of international negotiations at Copenhagen in 2009 dealt a major blow to a vision of cooperative forward motion.³⁵³ In ensuing years, it became increasingly clear that possibilities for bipartisan cooperation on climate and other energy issues were minimal if not non-existent. One of our interviewees summarized the bleak possibilities for congressional action as follows:

[A]t the federal level, I'd be shocked if there was federal climate change legislation for the foreseeable future. It's just too difficult an issue. And not just the Republicans fitting about it. If the Republicans weren't screaming about . . . There are a lot of Democrats that take cover under the Republican screaming about it; Democrats from coal

³⁵¹ Osofsky & Peel, *supra* note 107.

³⁵² *Id.*

³⁵³ *See supra* note 17.

states and things like that. OK, so, I just think that there's a lot of opposition out there. I don't see that changing anytime soon.³⁵⁴

As possibilities for comprehensive climate legislation faded, the issue of climate change itself suffered a backlash in polls as described in previous sections. Superstorm Sandy provided a temporary shift in politicians' and the public's willingness to engage climate change, but significant partisanship over climate change remained in its aftermath.³⁵⁵

Even during the early period of the Obama Administration, in which climate change legislation seemed possible, executive action formed a key part of the Obama Administration's approach. The EPA began taking steps pursuant to *Massachusetts v. EPA* within a week of Barack Obama assuming the presidency. The Administration both commenced considering whether greenhouse gas emissions from motor vehicles endanger public health and welfare and whether California should receive a waiver to regulate motor vehicle emissions at the state level (a waiver which had been denied by the Bush Administration and challenged by California in subsequent litigation).³⁵⁶

Since making the Endangerment Finding and granting the waiver less than a year into Barack Obama's presidency,³⁵⁷ the EPA has created and continues

³⁵⁴ Interview with Participant 4 (Nov. 14, 2012). Beyond the limitations of the international negotiations discussed *supra* note 17, congressional partisanship may constrain U.S. efforts to make new bilateral and multilateral climate change agreements. For example, substantial uncertainty exists regarding domestic implementation of the November 2014 agreement between the United States and China that helped smooth the road to the Paris Agreement. Philip Bump, *What the Big U.S.-China Climate Deal Means for Obama's Last Two Years*, WASH. POST: THE FIX (Nov. 12, 2014), <http://www.washingtonpost.com/blogs/the-fix/wp/2014/11/12/the-politics-of-the-big-u-s-china-climate-deal/>. Senator McConnell, for example, critiqued the deal on economic terms just after it was announced: "Our economy can't take the president's ideological war on coal that will increase the squeeze on middle-class families and struggling miners. . . . This unrealistic plan, that the president would dump on his successor, would ensure higher utility rates and far fewer jobs." Timothy Cama, *McConnell: U.S.-China Deal 'Unrealistic'*, HILL (Nov. 11, 2014, 11:43 PM), <http://thehill.com/policy/energy-environment/223810-mcconnell-blasts-unrealistic-us-china-climate-deal>. Moreover, while this bilateral agreement between the United States and China and the Paris Agreement both represent important progress, it is important to put these laudable new commitments into scientific and political perspective. The U.S. pledge to "reduce emissions by 26–28% below 2005 levels by 2025" translates into less than the reductions it would have made under the Kyoto Protocol, only 4%–5% below 1990 baselines. Email from William Burns, Co-Exec. Dir., Forum for Climate Geonengineering Assessment, to Environmental Law Professors Listserve, Univ. of Or. (Nov. 12, 2014, 12:21 AM) (on file with authors).

³⁵⁵ See *supra* Part II.C.

³⁵⁶ For a discussion of the Obama Administration's campaign positions and early action on climate change, see Osofsky, *supra* note 310.

³⁵⁷ Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009); EPA California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California's 2009 and

to develop substantial new regulations for both motor vehicles and major stationary sources of greenhouse gas emissions.³⁵⁸ The Administration's most significant accomplishment with respect to motor vehicles and climate change thus far is its National Program for emissions and fuel economy standards for new vehicles. Under this program, the EPA and Department of Transportation have promulgated joint rules on fuel economy and tailpipe greenhouse gas emissions, bridging the statutory and agency divide between applicable energy and environmental law. The plan—which emerged from the Obama Administration's efforts to forge a compromise between automakers³⁵⁹ and California³⁶⁰—allows manufacturers “to build a single light-duty national fleet that would satisfy all requirements under both programs and would provide significant reductions in both greenhouse gas emissions and oil consumption.”³⁶¹ The agencies finalized their first set of rules for model years

Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles, 74 Fed. Reg. 32,744 (July 8, 2009).

³⁵⁸ For an overview of EPA's mitigation efforts, see *Climate Change: Regulatory Initiatives*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/climatechange/EPAactivities/regulatory-initiatives.html>. (last visited Nov. 28, 2015).

³⁵⁹ For automakers' reactions, see, for example, Letter from Frederick A. Henderson, CEO of Gen. Motors Corp., to Lisa P. Jackson, EPA Adm'r, and Raymond H. LaHood, Sec'y of Transp. (May 17, 2009); Letter from Stefan Jacoby, President and CEO of Volkswagen Group of Am., to Lisa P. Jackson, EPA Adm'r, and Raymond H. LaHood, Sec'y of Transp. (May 17, 2009); Letter from James E. Lentz, President of Toyota Motor Sales, U.S.A., to Lisa P. Jackson, EPA Adm'r, and Raymond H. LaHood, Sec'y of Transp. (May 17, 2009); Letter from Dave McCurdy, President and CEO of the Alliance of Auto. Mfrs., to Raymond H. LaHood, Sec'y of Transp., and Lisa P. Jackson, EPA Adm'r (May 18, 2009); Letter from John Mendel, Exec. Vice President of Auto. Sales for Am. Honda Motor Co., to Raymond H. LaHood, Sec'y of Transp., and Lisa P. Jackson, EPA Adm'r (May 17, 2009); Letter from Alan R. Mulally, President and CEO of Ford, to Raymond H. LaHood, Sec'y of Transp., and Lisa P. Jackson, EPA Adm'r (May 17, 2009); Letter from Robert L. Nardelli, Chairman and CEO of Chrysler LLC, to Raymond H. LaHood, Sec'y of Transp., and Lisa P. Jackson, EPA Adm'r (May 17, 2009); Letter from James J. O'Sullivan, President and CEO of Mazda North Am. Operations, to Raymond H. LaHood, Sec'y of Transp., and Lisa P. Jackson, EPA Adm'r (May 18, 2009); Letter from Norbert Reithofer, Chairman of the Bd. of Mgmt. of The BMW Group, to Lisa P. Jackson, EPA Adm'r, and Raymond H. LaHood, Sec'y of Transp. (May 18, 2009); Letter from Dieter Zetsche, Chairman of the Bd. of Mgmt. of Daimler AG and Head of Mercedes-Benz Cars, and Thomas Weber, Member of the Bd. of Mgmt., Group Research, and Mercedes-Benz Cars Dev., to Raymond H. LaHood, Sec'y of Transp., and Lisa P. Jackson, EPA Adm'r (May 18, 2009).

³⁶⁰ For California's pledge to adopt the less stringent federal standards for Model Years 2012–2016, see Letter from Edmund G. Brown, Jr., Att'y Gen. of Cal., to Lisa P. Jackson, EPA Adm'r, and Raymond H. LaHood, Sec'y of Transp. (May 18, 2009); Letter from Mary D. Nichols, Chairman of the Cal. Air Res. Bd., to Lisa P. Jackson, EPA Adm'r, and Raymond H. LaHood, Sec'y of Transp. (May 18, 2009); Letter from Arnold Schwarzenegger, Governor of Cal., to Lisa P. Jackson, EPA Adm'r, and Raymond H. LaHood, Sec'y of Transp. (May 18, 2009).

³⁶¹ Notice of Upcoming Joint Rulemaking to Establish Vehicle GHG Emissions and CAFE Standards, 74 Fed. Reg. 24,007 (May 22, 2009). The EPA regulations focus on tailpipe emissions under the Clean Air Act, and the National Highway Traffic Safety Administration regulations involve CAFE standards under the Energy Independence and Security Act and the Energy Policy Conservation Act. They are coordinated for the

2012–2016 of light-duty vehicles in 2010.³⁶² Additional rulemaking efforts have addressed post-2017 model years of light-duty vehicles and emissions from medium and heavy vehicles.³⁶³ Over time, the federal agencies and California, in collaboration with the automobile industry, have also worked to harmonize state and federal standards.³⁶⁴

In addition to the legal challenges brought against the Obama Administration's motor vehicle regulations, prominent Republicans at times have criticized them. For example, a spokesperson for Mitt Romney's presidential campaign responded to the release of 2017–2025 vehicle standards by saying, "The president tells voters that his regulations will save them thousands of dollars at the pump, but always forgets to mention that the savings will be wiped out by having to pay thousands of dollars more upfront for unproven technology that they may not even want."³⁶⁵ However, significant industry involvement in developing and supporting the standards—thirteen major automakers supported the standards even as other industry organizations criticized them³⁶⁶—paired with the failure of legal challenges has dampened partisan disputes. This industry role dovetails with the corporate strategies discussed in the next section.

Far more controversially, the Obama Administration has used executive authority to require major industrial emitters to reduce their greenhouse gas emissions from stationary sources under § 111 of the Clean Air Act; in fact, contentious politics have repeatedly resulted in the Obama Administration's

first time under this program on the basis that "[t]he close relationship between emissions of CO₂ [carbon dioxide]—the most prevalent greenhouse gas emitted by motor vehicles—and fuel consumption, means that the technologies to control CO₂ emissions and to improve fuel economy overlap to a great degree." *Id.* at 24,009 n.7. For further discussion of compliance and measurement under the program, see *id.*

³⁶² See Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 25,324 (May 7, 2010); see also Barack Obama, U.S. President, Remarks on National Fuel Efficiency Standards (May 19, 2009), http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-on-national-fuel-efficiency-standards/ (the Rose Garden agreement).

³⁶³ 2017 and Later Model Year Light Duty Vehicle GHC Emissions and CAFE Standards, 75 Fed. Reg. 62,739 (Oct. 13, 2010); Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles, 75 Fed. Reg. 74,152 (Nov. 30, 2010). For correction to proposed rules, see Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles, 75 Fed. Reg. 81,952 (Dec. 29, 2010).

³⁶⁴ Press Release, U.S. Dep't of Transp., DOT and California Align Timeframe for Proposing Standards for Next Generation of Clean Cars (Jan. 21, 2011), <http://www.transportation.gov/briefing-room/epa-dot-and-california-align-timeframe-proposing-standards-next-generation-clean-cars>.

³⁶⁵ Bill Vlasic, *U.S. Sets High Long-Term Fuel Efficiency Rules for Automakers*, N.Y. TIMES, Aug. 29, 2012, at B1.

³⁶⁶ See *id.*

delaying aspects of these regulations.³⁶⁷ Starting in 2010, EPA established threshold greenhouse gas permit requirements—aimed at the most significant emitters that account for 70% of emissions—for new and existing power plants, refineries, and other major industrial emitters under the New Source Review Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule.³⁶⁸ In September 2013, the EPA proposed a “Carbon Pollution Standard” for new power plants under Clean Air Act § 111(b), which was particularly highlighted in the “war on coal” rhetoric because coal-fired power plants would have to use partial carbon sequestration and storage to meet it.³⁶⁹ EPA Administrator Gina McCarthy publicly justified that decision as being in line with where the market was going, claiming that coal facilities being built now use this technology, but this justification did not allay Republican and industry critique.³⁷⁰ In June 2014, the EPA took its next contentious step with its draft “Clean Power Plan,” which complemented its regulation of new power plants by proposing “emission guidelines for states to follow in developing plans to address greenhouse gas emissions from existing fossil fuel-fired electric generating units”; the plan aims to reduce carbon dioxide emissions from the power sector by 30% from 2005 levels by 2030.³⁷¹ The Obama Administration released the final version of the Clean Power Plan in August

³⁶⁷ In February 2010, in response to political pressure regarding the economic impact of planned mandates, the EPA modified its plans to slow down the regulatory process. Then-Administrator Jackson indicated that the EPA would begin to phase in permitting in 2011 for large stationary sources and would wait until after 2016 for the smallest sources. *See* Letter from Lisa P. Jackson, EPA Adm’r, to Jay D. Rockefeller IV, U.S. Senator (Feb. 22, 2010).

³⁶⁸ Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514, 31,537 (June 3, 2010); *Clean Air Act Permitting for Greenhouse Gas Emissions—Final Rules: Fact Sheet*, EPA (Dec. 23, 2010), <http://www3.epa.gov/nsr/ghgdocs/20101223factsheet.pdf>; Press Release, EPA, EPA to Set Modest Pace for Greenhouse Gas Standards / Agency Stresses Flexibility and Public Input in Developing Cost-Effective and Protective GHC Standards for Largest Emitters (Dec. 23, 2010), <http://yosemite.epa.gov/opa/admpress.nsf/6424ac1caa800aab85257359003f5337/d2f038e9daed78de8525780200568bec!OpenDocument>.

³⁶⁹ *See* 2013 Proposed Carbon Pollution Standard for New Power Plants, EPA, <http://www2.epa.gov/carbon-pollution-standards/2013-proposed-carbon-pollution-standard-new-power-plants> (last updated July 17, 2015); Gina McCarthy, *Keynote Remarks at the University of Michigan Environmental Law and Public Health Conference*, 3 MICH. J. ENVTL. & ADMIN. L. 243, 247 (2014). For examples of the Republican critique, see Tom Cohen et al., *Obama’s Big Environmental Move: Power Plants to Cut Carbon Pollution*, CNN (Sept. 8, 2014), <http://www.cnn.com/2014/06/02/politics/epa-carbon-emissions/>.

³⁷⁰ Cohen et al., *supra* note 369; McCarthy, *supra* note 369; Ben Geman, *EPA Assailed on Power Plan Regulations*, HILL (Nov. 14, 2013), <http://thehill.com/policy/energy-environment/190269-epa-assailed-on-power-plant-carbon-regs>; Notes of Hari Osofsky from Keynote Address by EPA Administrator Gina McCarthy at the Michigan Environmental Law and Public Health Conference (Sept. 26, 2013) (on file with author).

³⁷¹ Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34,830, 34,832 (June 18, 2014).

2015, which amended it somewhat in response to feedback though did not alter these fundamental goals.³⁷²

The state and federal dynamics around the Clean Power Plan embody the complexities of “go around” strategies based on federal executive action as an approach to progress in a divisive partisan environment. As detailed in the Introduction, reactions to the plan split along partisan lines from the start. Since then, Republican opponents of the plan have sought to block implementation along multiple pathways. At a federal level, Energy and Power Subcommittee Chairman Ed Whitfield (R–Ky.) circulated a discussion draft of the Ratepayer Protection Act in March 2015.³⁷³ This bill, which was passed by the House but has little prospect of becoming law, would extend the rule’s compliance dates, including dates for submission of state plans, pending judicial review.³⁷⁴ More fundamentally, it would allow states to avoid implementation if the governor, in consultation with relevant state officials determines that compliance would have an adverse affect on retail, commercial or industrial ratepayers, or on the electricity system’s reliability.³⁷⁵ Full Committee Chairman Fred Upton (R–Mich.) described this bill as “about protecting families and jobs. It gives states the time they need before this expensive and legally shaky new rule puts affordable, reliable power at risk.”³⁷⁶

Given the limited prospects for federal legislative overrule, however, the primary battlegrounds over the Clean Power Plan have been and will continue to be courtrooms and state-level governments. Lawsuits brought in response to the draft regulation by Murray Energy Corporation, the largest privately-owned coal company in the United States, and several states opposed to the Clean Power Plan, argued that EPA’s 2012 promulgation of national emissions standards for power plants under Clean Air Act § 112 deprives it of legal

³⁷² EPA Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, Prepublication Version of the Final Rule 849-850 (proposed Aug. 3, 2015) [hereinafter Clean Power Plan] (to be codified at 40 C.F.R. pt. 60).

³⁷³ Comm. on Energy & Commerce, *Whitfield Unveils Ratepayer Protection Act to Address EPA’s Overreaching Power Plant Rule*, HOUSE OF REPRESENTATIVES (Mar. 23, 2015), <http://energycommerce.house.gov/press-release/whitfield-unveils-ratepayer-protection-act-address-epa%E2%80%99s-overreaching-power-plant-rule>.

³⁷⁴ *Id.*

³⁷⁵ *Id.*

³⁷⁶ *Id.*

authority to establish state-by-state standards for those power plants.³⁷⁷ The two cases were consolidated and argued before the D.C. Circuit in April 2015, which in June 2015 denied the petition because the rule was not yet final.³⁷⁸

Challenges to the final plan were brought even before the *Federal Register* published the rule, with sixteen states filing a stay request³⁷⁹ and an overlapping group of fifteen states filing an emergency petition for extraordinary writ in the first two weeks after the Obama Administration's announcement.³⁸⁰ Following the final rule's publication in the *Federal Register* on October 23, 2015, twenty-seven states and numerous industry groups filed another fifteen challenges, which were consolidated in the D.C.

³⁷⁷ Specifically, a key part of the legal challenges in the cases focused on conflicting House and Senate versions of the 1990 amendments to the Clean Air Act: the House version bars § 111(d) regulation of sources already regulated under § 112, and the Senate version only bars re-regulation of the same pollutant. Petition for Extraordinary Writ at 18–19, *Murray Energy Corp. v. EPA* (No. 14-1112), 2015 WL 5062506 (D.C. Cir. June 18, 2014). West Virginia, Alabama, Alaska, Indiana, Kansas, Kentucky, Louisiana, Nebraska, Ohio, Oklahoma, South Dakota, and Wyoming intervened on behalf of Murray Energy Corporation, while California, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Mexico, Oregon, Rhode Island, Vermont, Washington, and District of Columbia intervened on behalf of the EPA. Brief of the States of West Virginia et al. as Intervenors In Support of the Petitioner, *Murray Energy Corp. v. EPA* (*In re Murray Energy Corp.*), 788 F.3d 330 (D.C. Cir. 2015) (Nos. 14-1112, 14-1151), 2014 WL 7273776 (D.C. Cir. Dec. 22, 2014); Final Brief of the States of New York et al. as Intervenors in Support of Respondent, *In re Murray Energy Corp.*, 788 F.3d 330 (Nos. 14-1112, 14-1151), 2015 WL 1022480. *West Virginia v. EPA* is framed around the same legal challenge, but in the context of a settlement agreement with intervenors. Petition for Review, *West Virginia, et al. v. EPA*, 788 F.3d 330 (D.C. Cir. 2015) (No. 14-1146). In that case, petitioners are West Virginia, Alabama, Indiana, Kansas, Kentucky, Louisiana, Nebraska, Ohio, Oklahoma, South Carolina, South Dakota, and Wyoming, and intervenors in support of respondent EPA are New York City, Massachusetts, District of Columbia, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, California, Connecticut, Delaware, Maine, New Mexico, New York State, Oregon, Rhode Island, Vermont, and Washington. *Id.*; Brief for State Intervenors in Support of Respondent, *West Virginia et al. v. EPA*, 788 F.3d 330 (D.C. Cir. 2015) (No. 14-1146). For a summary of the cases and potential future challenges, see *Legal Challenges—Overview and Documents*, E&E PUBL'G, http://www.eenews.net/interactive/clean_power_plan/fact_sheets/legal (last visited Apr. 25, 2015).

³⁷⁸ *In re Murray Energy Corp.*, 788 F.3d at 334; Coral Davenport, *Judges Are Skeptical of Challenge to Proposed E.P.A. Rule on Climate Change*, N.Y. TIMES, Apr. 17, 2015, at A24.

³⁷⁹ The states applying for a stay include Alabama, Arizona, Arkansas, Indiana, Kansas, Kentucky, Louisiana, Nebraska, Ohio, Oklahoma, South Carolina, South Dakota, Utah, West Virginia, Wisconsin, and Wyoming. Application for Administrative Stay by the State of West Virginia and 15 Other States at 2, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electricity Generating Units; Final Rule, EPA Docket No. EPA-HQ-OAR-2013-0602 (Aug. 5, 2015), <http://www.ago.wv.gov/Documents/WV%20-%20Administrative%20Request%20for%20Stay%20CPP.PDF>; see also John Funk, *Shelve Clean Power Plan Until Courts Rule, Ohio, West Virginia and 13 Other States Ask EPA*, CLEV. (Aug. 5, 2015, 6:41 PM), http://www.cleveland.com/business/index.ssf/2015/08/shelve_clean_power_plan_until.html.

³⁸⁰ Those states petitioning for an extraordinary writ include Alabama, Arkansas, Florida, Indiana, Kansas, Kentucky, Louisiana, Michigan, Nebraska, Ohio, Oklahoma, South Dakota, West Virginia, Wisconsin, and Wyoming. Emergency Petition for Extraordinary Writ, *In re West Virginia et al.*, No. 15-1277 (D.C. Cir. Aug. 13, 2015), http://www.eenews.net/assets/2015/08/14/document_ew_04.pdf.

Circuit Court of Appeals. These challenges again address the conflicting versions of § 111(d), as well as the question of whether the EPA can regulate broader energy decision-making beyond the “fence line” of power plants.³⁸¹ On November 4, 2015, eighteen states, the District of Columbia, five cities, and a county intervened in the consolidated cases on behalf of the EPA.³⁸² The pattern in these Clean Power Plan challenges of states dividing into pro- and anti-regulatory groupings follows one that has occurred repeatedly in climate change litigation, including in *Massachusetts v. EPA* and the litigation over the denial of California’s request for a waiver to regulate motor vehicle greenhouse gas emissions by the Bush Administration’s EPA.³⁸³ The D.C. Circuit denied the stay request on January 21, 2016, which allowed the Obama Administration to continue Clean Power Plan implementation while the legal challenges are being resolved.³⁸⁴

However, less than three weeks later, on February 9, 2016, the Supreme Court granted the stay, which prevents implementation and enforcement of the Clean Power Plan during the disposition of the legal challenges. In response to this setback, the Obama Administration indicated that it will continue to “work with states that choose to continue plan development and will prepare the tools those states will need,” as well as “take aggressive steps to make forward progress to reduce carbon emissions.” Unsurprisingly, there was a strong partisan divide in reactions to the stay ruling.³⁸⁵

³⁸¹ See *Legal Challenges—Overview and Documents*, *supra* note 377; Emily Holden, *2016 Holds Flurry of State Planning, Legal Drama for Clean Power Plan*, E&E PUBL’G (Jan. 4, 2016), <http://www.eenews.net/stories/1060030047>.

³⁸² The intervenors include

[t]he States of New York, California (by and through Governor Edmund G. Brown Jr., the California Air Resources Board, and Attorney General Kamala D. Harris), Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Minnesota (by and through the Minnesota Pollution Control Agency), New Hampshire, New Mexico, Oregon, Rhode Island, Vermont, Washington, the Commonwealths of Massachusetts and Virginia, the District of Columbia, the Cities of Boulder, Chicago, New York, Philadelphia, and South Miami, and Broward County, Florida.

Unopposed Motion for Leave to Intervene as Respondents at 1, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. 2015).

³⁸³ See Osofsky, *supra* note 310; Osofsky, *supra* note 343.

³⁸⁴ See *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Jan. 21, 2016). The court also expedited consideration. *Id.*

³⁸⁵ *West Virginia v. EPA*, No. 15A773 (U.S. Feb. 9, 2016) (granting the stay); Press Release, White House, Office of the Press Sec’y, Press Secretary Josh Earnest on the Supreme Court’s Decision to Stay the Clean Power Plan (Feb. 9, 2016), <https://www.whitehouse.gov/the-press-office/2016/02/09/press-secretary-josh-earnest-supreme-courts-decision-stay-clean-power>; For examples of the divergent responses, see Adam

The cooperative federalist implementation structure under the Clean Air Act—in which states have flexibility to create their own plans to implement a federal standard—has complicated how partisan divisions have translated into state action. A group of Democratic-leaning states, which overlaps significantly with those states supporting EPA climate change regulation across numerous cases, filed joint comments in December 2014 supporting the Clean Power Plan with some suggested revisions.³⁸⁶ Another group of states, largely Republican and many of which have major coal industries, oppose the Clean Power Plan, but vary in their approach to implementation.³⁸⁷ Senator Mitch McConnell (R-Ky.) has led an effort, supported by the American Legislative Exchange Council (ALEC) and its campaign to disseminate model legislation, to encourage states to resist implementation.³⁸⁸ However, few states have chosen to follow that course out of a practical concern about the regulatory consequences; if they do not create a state implementation plan and the Clean Power Plan goes into effect, the EPA will impose a federal implementation plan on them.³⁸⁹ While many states have passed resolutions reinforcing their authority and joined courtroom challenges, most state legislation passed in this context thus far has been to advance their implementation efforts (though substantial state legislation is still pending,

Liptak & Coral Davenport, *Supreme Court Deals Blow to Obama's Efforts to Regulate Coal Emissions*, N.Y. TIMES (Feb. 9, 2016), <http://www.nytimes.com/2016/02/10/us/politics/supreme-court-blocks-obama-epa-coal-emissions-regulations.html>; *Supreme Court Puts Obama's Power Plant Regs on Hold*, FOXNEWS.COM (Feb. 9, 2016), <http://www.foxnews.com/politics/2016/02/09/supreme-court-puts-obamas-clean-power-plan-on-hold.html>.

³⁸⁶ Letter from State Env'tl. Agency Leaders, Energy Agency Leaders, and Pub. Util. Comm'rs from 14 States, to Gina McCarthy, EPA Adm'r, Joint State Comments in Response to EPA's Proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Dec. 1, 2014), http://www.georgetownclimate.org/sites/www.georgetownclimate.org/files/GCC-States_CPP_Support_and_Comments-Dec%202014.pdf.

³⁸⁷ See ALEC, THE STATE FACTOR: STATES ARE ENGAGING EPA ON CLEAN POWER PLAN (Nov. 2014), <http://alec.org/docs/State-Factor-EPA-Clean-Power-Plan.pdf>; Naveena Sadasivam, *Coal States Building Wall of Red Tape to Resist EPA's Clean Power Plan*, INSIDE CLIMATE NEWS (Feb. 17, 2015), <http://insideclimatenews.org/news/17022015/coal-states-building-wall-red-tape-resist-epas-clean-power-plan> (containing a map of how coal states overlap with states bringing lawsuits).

³⁸⁸ For examples of ALEC's materials, see *Clean Power Plan Facts—Maps*, ALEC, <http://www.alec.org/cpp-facts/maps/> (last visited Nov. 29, 2015); *EPA's Regulatory Train Wreck*, ALEC, <http://www.alec.org/initiatives/epas-regulatory-train-wreck/> (last visited Nov. 29, 2015).

³⁸⁹ For a discussion of the consequences for states that choose not to submit a state implementation plan, see Daniel Selmi, *States Should Think Twice Before Refusing Any Response to EPA's Clean Power Rules*, COLUM. L. SCH. SABIN CTR. FOR CLIMATE CHANGE L. (Mar. 2015), https://web.law.columbia.edu/sites/default/files/microsites/climate-change/selmi_-_states_should_think_twice_before_refusing_any_response_to_epas_clean_power_rules.pdf.

which could change trends).³⁹⁰ As highlighted in an April 2015 letter by several Democratic senators to the National Governors Association, even Senator McConnell's home state of Kentucky has taken steps to develop a compliance plan.³⁹¹

Moreover, the politics and legal dynamics of these challenges to greenhouse gas regulation have been and likely will continue to be intertwined with related battles over Obama Administration efforts to regulate hazardous air pollutants, particularly mercury, from coal fire power plants under § 112 of the Clean Air Act. For example, when the Supreme Court held in June 2015 in *Michigan v. EPA* that the EPA unreasonably failed to consider costs in its regulation of emissions by power plants of mercury and other hazardous air pollutants,³⁹² the American Energy Alliance, a group with links to the Koch brothers, connected this case to political efforts to resist the Clean Power Plan: "[The] EPA can no longer ignore the costs of its reckless agenda. This decision shows that states should resist EPA's calls to submit plans for the upcoming

³⁹⁰ See Melanie Condon & Jocelyn Durkay, *States' Reactions to EPA Greenhouse Gas Emissions Standards*, NAT'L CONF. ST. LEGISLATURES (Aug. 13, 2015), <http://www.ncsl.org/research/energy/states-reactions-to-proposed-epa-greenhouse-gas-emissions-standards635333237.aspx>; see also *E&E's Power Plan Hub*, E&E PUBL'G, http://www.eenews.net/interactive/clean_power_plan (last visited Apr. 25, 2015) (providing links to state responses). For additional descriptions of the status of state legislation and its evolution over time, which vary in tone, see Jeff McMahon, *States Ignoring Mitch McConnell, Working On Clean Power Plan: EPA*, FORBES (Apr. 12, 2015), <http://www.forbes.com/sites/jeffmcmahon/2015/04/12/states-ignoring-mitch-mcconnell-epa/>; Sadasivam, *supra* note 387; Jeffrey Tomich & Kristi E. Swartz, *Clean Power Plan Bills Generate Debate across the Southeast, Midwest*, E&E PUBL'G: ENERGYWIRE (Mar. 13, 2015), <http://www.eenews.net/stories/1060014977>; Karen Ulenhuth, *State Legislators Take Preemptive Aim at EPA Power Plant Rules*, MIDWEST ENERGY NEWS (Apr. 29, 2014), <http://midwestenergynews.com/2014/04/29/state-legislators-take-preemptive-aim-at-epa-power-plant-rules/>. For examples of positions by advocacy organizations on both sides, compare Aliya Haq, *States Clear Path for Clean Power Plan; Coal Industry and ALEC Floundering*, NRDC: SWITCHBOARD (Apr. 13, 2015), http://switchboard.nrdc.org/blogs/ahaq/states_clear_path_for_clean_po.html, and Bobby Magill, *States Suing to Stop CO2 Cuts Prep For Them Anyway*, CLIMATE CENTRAL (Sept. 11, 2014), <http://www.climatecentral.org/news/states-suing-to-stop-co2-cuts-prep-for-them-anyway-18013>, with *Governors Use 'State of the State' Speeches to Open Fire on EPA's Clean Power Plan*, COUNT ON COAL (Jan. 16, 2015), <http://www.countoncoal.org/2015/01/16/governors-use-state-of-the-state-speeches-to-open-fire-on-epas-clean-power-plan/>.

³⁹¹ Letter from Sen. Whitehouse et. al to Nat'l Governors Ass'n (Apr. 14, 2015). For additional materials on Kentucky's decision-making around compliance, see James Bruggers, *Kentucky Defends Work Toward Climate Plan*, COURIER-J., (Mar. 5, 2015, 9:57 PM) <http://www.courier-journal.com/story/watchdog-earth/2015/03/05/mcconnell-tells-states-to-resist-clean-power-plan-requirements/24457533/>.

³⁹² See 135 S. Ct. 2699, 2712 (2015) (noting "EPA strayed far beyond" the bounds of "reasonable interpretation").

climate rule.”³⁹³ More substantively, if the § 112 regulations are ultimately prevented from moving forward, that aspect of the legal challenge would be eliminated.³⁹⁴ However, the Supreme Court ruling in *Michigan v. EPA* is more likely to delay than ultimately prevent those regulations. On November 20, 2015, the EPA proposed a supplemental finding intended to address the Supreme Court’s concern in that case.³⁹⁵ The D.C. Circuit then issued an order on December 15, 2015, declining to vacate the EPA’s mercury rule while the agency is revising it in response to the Supreme Court decision, noting that the EPA is “on track to issue a final finding” by April 15, 2016.³⁹⁶

Domestic implementation of the 2015 Paris Agreement resulting from recent international climate negotiations looms as another likely partisan battleground despite the agreement being framed to address U.S. political constraints. The Obama Administration has indicated its view that the new agreement does not require congressional approval as the binding elements can be implemented pursuant to existing areas of executive authority under the Clean Air Act and the United Nations Framework on Climate Change (to which the United States is a party).³⁹⁷ However, the decision by the

³⁹³ Richard Revesz, *What the Supreme Court’s EPA Decision Means for the Mercury Rule and Clean Power Plan*, HILL: CONTRIBUTORS (June 20, 2015, 11:00 AM) (alteration in original), <http://thehill.com/blogs/pundits-blog/energy-environment/246516-what-the-epa-decision-means-for-the-mercury-rule-and>.

³⁹⁴ See Ann Carlson, *MATS Rules Declared Invalid in Michigan v. EPA, 5-4*, LEGAL PLANET (June 29, 2015), <http://legal-planet.org/2015/06/29/mats-rules-declared-invalid-in-michigan-v-epa-5-4/>.

³⁹⁵ The finding was published in the *Federal Register* on December 1, 2015. EPA, Supplemental Finding that It Is Appropriate and Necessary to Regulate Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units (Dec. 1, 2015), <https://www.federalregister.gov/articles/2015/12/01/2015-30360/supplemental-finding-that-it-is-appropriate-and-necessary-to-regulate-hazardous-air-pollutants-from>.

³⁹⁶ *White Stallion Energy Ctr., LLC, v. EPA*, No. 12-1100 (D.C. Cir. Dec. 15, 2015) (per curiam), http://www.eenews.net/assets/2015/12/15/document_gw_05.pdf. Beyond these state-federal dynamics, if the Clean Power Plan survives the legal challenges and goes into effect, partisanship may further complicate the institutional complexities of implementation. For an in-depth analysis of the need for regional cooperation, barriers to it, and institutional possibilities for implementation, see Hari M. Osofsky & Hannah J. Wiserman, *Regional Energy Governance Under the Clean Power Plan*, 43 *ECOLOGY L.Q.* (forthcoming 2016), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2678342.

³⁹⁷ Karoun Demirjian & Steven Mufson, *Trick or Treaty? The Legal Question Hanging over the Paris Climate Change Conference*, WASH. POST (Nov. 30, 2015), <https://www.washingtonpost.com/news/powerpost/wp/2015/11/30/trick-or-treaty-the-legal-question-hanging-over-the-paris-climate-change-conference/>. Academic opinion backs up this view. See generally David A. Wirth, *The International and Domestic Law of Climate Change: A Binding International Agreement Without the Senate or Congress?*, 39 *HARV. ENVTL. L. REV.* 515 (2015). Indeed, a technical error in the final draft of the agreement—which substituted “shall” for “should”—almost derailed the Paris climate negotiations at the eleventh hour as the mandatory language would have made the relevant provision binding, hence requiring Senate ratification as a treaty. See Andrew Restuccia, *The One Word that Almost Sank the Climate Talks*, POLITICO (Dec. 12, 2015, 7:51 PM), <http://www.politico.com/story/2015/12/paris-climate-talks-tic-toc-216721>; *supra* note 18.

Administration to “go around” congressional approval of the Paris Agreement is being scrutinized by Republicans and may end up in the courts.³⁹⁸

As noted in the Introduction, in the lead up to conclusion of the Paris Agreement, Republican members of Congress issued defiant statements attacking the President’s ability to implement any new international commitments made on behalf of the United States. On the floor of the House, Representative Edward Whitfield (R–Ky.) stated, “We want the world to know that there is disagreement with the President on this issue—not about the fact that the climate is changing, but about the priority that is being placed on it.”³⁹⁹ Senator John Barrasso was even more blunt, declaring, “The President’s promises cannot be relied on.”⁴⁰⁰ The President’s decision to rely on executive authority to circumvent Congress on the Paris Agreement is also susceptible to being overturned by the next administration if it has a different view of climate change. Republican candidates for the presidency were unusually silent in their debate just after conclusion of the Paris Agreement, but many have previously expressed skeptical views regarding both climate science and the necessity for regulatory measures to address emissions, and some have directly attacked the agreement.⁴⁰¹

The mitigation actions that the Obama Administration has attempted to justify under *Massachusetts v. EPA* have been accompanied by significant, but far less controversial, action on adaptation. President Obama created an Interagency Climate Change Adaptation Taskforce during his first year in office to explore how federal policies and programs could prepare for climate change better. He simultaneously directed federal agencies to “evaluate agency climate-change risks and vulnerabilities and to manage the effects of climate change on the agency’s operations and mission in both the short and long term.”⁴⁰²

³⁹⁸ Kyle Feldscher, *Senate GOP Steels Itself for Fight over the Paris Agreement*, WASH. EXAMINER (Dec. 13, 2015), www.washingtonexaminer.com/senate-gop-steels-itself-for-fight-over-paris-agreement/article/2578253. John Knox argues that in the event of such a challenge, the issue should not be treated as one of political question by the courts. See John H. Knox, *The United States, Environmental Agreements, and the Political Question Doctrine*, 40 N.C. J. INT’L L. & COM. REG. 933 (2015).

³⁹⁹ David M. Herszenhorn, *Votes in Congress Move to Undercut Climate Pledge*, N.Y. TIMES (Dec. 1, 2015), <http://www.nytimes.com/2015/12/02/us/politics/as-obama-pushes-climate-deal-republicans-move-to-block-emissions-rules.html>.

⁴⁰⁰ *Id.*

⁴⁰¹ Adler, *supra* note 20; Editorial, *Silence on the Climate Pact from the Republican Candidates*, N.Y. TIMES (Dec. 14, 2015), <http://www.nytimes.com/2015/12/15/opinion/silence-on-the-climate-pact-from-the-republican-candidates.html>.

⁴⁰² Exec. Order No. 13,514, 74 Fed. Reg. 52,117, 52,122 (Oct. 5, 2009).

Adaptation efforts have continued to develop—often in collaboration with smaller scale efforts by cities, states, regions, and tribes that frequently have been ahead of the federal government—throughout President Obama’s two terms. In 2013, federal agencies released climate change adaptation plans covering operations, missions and programs. That same year, the President’s Climate Action Plan outlined further steps to prepare for climate change impacts. The plan focuses particularly on removing barriers to action, fostering state, local and tribal efforts, building scientific capacity, and identifying sectoral vulnerabilities.⁴⁰³ A further executive order that year directed federal agencies to take a variety of steps on adaptation,⁴⁰⁴ and established a federal-level interagency Council on Climate Preparedness and Resilience and a multi-level State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience.⁴⁰⁵

Adaptation measures with a domestic focus, particularly when framed more broadly as discussed in depth in Part II.C, have often received bipartisan support despite broader partisanship around climate change. Eli Lehrer, president of R Street Institute, a conservative, free-market focused think tank, explained, “The best adaptation strategies are very good policy in any case. . . . And whether intentionally or not, a lot of Republicans are already taking the lead on things that are climate adaptation strategies.”⁴⁰⁶ Leaders in both parties have shown awareness of possibilities for “going together” on these issues, not only in the executive sphere but also in Congress. Senator Roger Wicker (R–Miss.) explains his co-sponsorship of legislation to support federal, state, and local adaptation planning in these terms: “I do believe it is a way for us to do something sensible that is also a little more realistic than trying to change the sea level.”⁴⁰⁷ Although not all Republicans support these measures, and more internationally oriented action such as President Obama’s \$3 billion pledge to the United Nations Green Climate Fund that created strong negative

⁴⁰³ *The President’s Climate Action Plan*, EXECUTIVE OFF. PRESIDENT 12–14 (June 2013), <https://www.whitehouse.gov/sites/default/files/image/president27climateactionplan.pdf>; see also *President Obama’s Plan to Fight Climate Change*, EXECUTIVE OFF. PRESIDENT (June 25, 2013), <http://www.whitehouse.gov/share/climate-action-plan>.

⁴⁰⁴ Exec. Order No. 13,653, Fed. Reg. 66,819, 66,821–22 (Nov. 6, 2013).

⁴⁰⁵ *Id.* at 66,822–23

⁴⁰⁶ Zack Colman, *Democrats Shift from Climate ‘Change’ to ‘Adaptation’ to Woo Republicans*, WASH. EXAM’R (Apr. 11, 2014, 12:00 AM), <http://www.washingtonexaminer.com/democrats-shift-from-climate-change-to-adaptation-to-woo-republicans/article/2547109>.

⁴⁰⁷ *Id.*

reactions by Republicans, executive action on adaptation has received far less pushback than that on mitigation.⁴⁰⁸

While partisan responses to the Obama Administration's executive action vary, his actions form the core of U.S. federal action on both mitigation and adaptation. Moreover, his most controversial "go around" regulations of power plant greenhouse gas emissions have been protected, at least as long as he is in office and they survive courtroom challenges, by the very partisanship that has stymied him in Congress. The dynamics that hindered passage of comprehensive climate legislation also prevent the repeal of the Clean Air Act authority that the EPA relies upon.⁴⁰⁹ Over time, if regulations that survive in the courtroom remain in place long enough—facilitated by a stalled Congress—there is potential for the change to become entrenched as companies' business planning and the public evolve in response to them. In other words, it is possible for "go-around" strategies over time to meld with more cooperative approaches to generate broader-based support for measures.

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⁴⁰⁸ *Id.*; Kathleen Hennessy & Neela Banerjee, *Obama to Pledge \$3 Billion in Climate Aid for Developing Countries*, L.A. TIMES (Nov. 14, 2014, 9:07 AM), <http://www.latimes.com/nation/la-fg-obama-climate-20141114-story.html>

⁴⁰⁹ Moreover, the slow pace of regulatory promulgation and repeal means that regulations finalized by the Obama Administration would remain in place for some months, even if a Republican administration committed to rolling them back wins the 2016 presidential election.

⁴¹⁰ © 2012 Wasserman. Boston Globe. All rights reserved. Distributed by Tribune Content Agency; see also Michael Shank & Julia Trezona Peek, Opinion, *Dirty Energy Dollars: Members of Congress Should Refuse Campaign Donations from Fossil Fuel Industries*, U.S. NEWS & WORLD REP. (Oct. 28, 2014, 9:50 AM), <http://www.usnews.com/opinion/economic-intelligence/2014/10/28/congress-should-refuse-donations-from-dirty-fossil-fuel-energy-companies>.

The first two sections of this Part have focused on reframing strategies with respect to government, whether by scaling down to local government or shifting branches. Governments obviously have an important role to play in shaping the regulatory response to climate change and in adopting measures that can move forward on energy transition. However, just as important, if not more so, are actions taken by private actors that are the source of emissions as well as the focus of activities to respond to climate change impacts. Corporations in particular are the largest and most influential group of such actors whose actions are deeply tied to the success of mitigation and adaptation efforts. While government regulation plays an important role in shaping corporate behavior, and while many of the efforts described previously affect (and are fostered or constrained by) corporations, this section considers ways in which strategies can influence private actors directly.

In the world of climate policy, corporations and the private sector—particularly in the energy industry—are often cast as the “bad guys.” Coal and oil and gas companies produce the fossil fuel products that contribute nearly 70% of global greenhouse emissions when consumed for electricity generation and transportation.⁴¹¹ These energy companies have at times, and in some cases continue to be, actively involved in lobbying efforts at the national and international levels to thwart action on climate change.⁴¹² Others have supported groups that promote skeptical views of climate science.⁴¹³ In addition, coal and oil and gas companies and their industry associations have frequently been at the forefront of anti-regulatory litigation challenging proactive climate and clean energy measures taken by the Obama Administration and in several states.⁴¹⁴

⁴¹¹ *CAIT Climate Data Explorer*, WORLD RESOURCES INST., <http://cait2.wri.org/wri/> (last visited Nov. 29, 2015) (showing energy sector figures for 2009).

⁴¹² UNION OF CONCERTED SCIENTISTS, SMOKE, MIRRORS & HOT AIR: HOW EXXONMOBIL USES BIG TOBACCO’S TACTICS TO MANUFACTURE UNCERTAINTY ON CLIMATE SCIENCE 9 (2007), http://www.ucsusa.org/sites/default/files/legacy/assets/documents/global_warming/exxon_report.pdf.

⁴¹³ Brant Olson & Nick Surgey, *5 Ways ALEC Denies the Facts of Climate Change*, FORECAST FACTS (Sept. 25, 2014), <https://s3.amazonaws.com/s3.forecastthefacts.org/images/ResponsetoALECPressStatement.pdf>.

⁴¹⁴ See, e.g., *In re Polar Bear Endangered Species Act Listing & § 4(D) Rule Litigation*, 709 F.3d 1, 2 (D.C. Cir. 2013); *Coal. for Responsible Regulation v. EPA*, 684 F.3d 102, 113 (D.C. Cir. 2012); *In re Polar Bear Endangered Species Act Listing & § 4(D) Rule Litigation*, 818 F. Supp. 2d 214, 217–18 (D.D.C. 2011); *In re Polar Bear Endangered Species Act Listing & § 4(D) Rule Litigation*, 794 F. Supp. 2d 65, 68 (D.D.C. 2011); *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295, 301 (D. Vt. 2007); *Cent. Valley Chrysler-Jeep, Inc. v. Witherspoon*, No. 04-6663, 2007 WL 35688 (E.D. Cal. Jan. 16, 2007).

A lot of this activity has a strong partisan edge. For instance, at least two thirds of the energy and natural resource industry's donations since 1990 have gone to Republican candidates.⁴¹⁵ Moreover, this split and the amounts of money involved have grown since the Supreme Court's 2010 *Citizens United* ruling, which increased the opportunities for corporations to influence election campaigns through political donations. For example, in the 2012 presidential election year, energy and resource industry companies donated \$92.6 million to Republicans and \$22.6 million to Democrats. In the 2014 midterm elections, they donated \$58.8 million to Republicans—more than the total donations to Republicans in the 2008 presidential election year—and \$16.3 million to Democrats. Average donations to Republican House and Senate candidates also rose significantly after 2010. House Speaker John Boehner (R–Ohio) received more donations, \$1,677,887 million, from these industries in 2013–2014 than any other candidate, and four of the top five candidates receiving donations from the energy and natural resources industries were Republicans.⁴¹⁶

Although blaming energy companies for failed climate policy may be the politically easier course, especially considering these donation numbers, there is growing acknowledgment of the need to engage these companies as crucial partners in the effort to transition the energy economy.⁴¹⁷ Fossil fuel companies are not actually as monolithic in their anti-regulatory stance as such a portrayal would suggest; while the coal industry is steadfastly opposed to climate change action, the oil and gas industry has had a far more mixed reaction, likely due in part to their greater level of diversification and larger profit margin.⁴¹⁸ The 2015 scandal over Exxon's obfuscation of climate science data has reinforced the public and legal pressure on fossil fuel companies to address climate change constructively—Exxon now acknowledges climate change risks and claims to no longer fund climate denial

⁴¹⁵ The Center for Responsive Politics maintains information on corporate political donations on its OpenSecrets website. See *Interest Groups*, CTR. FOR RESPONSIVE POL., <https://www.opensecrets.org/industries/> (last visited Oct. 12, 2015). This information can be broken down by sector. For patterns of energy/natural resource donations, see *Energy/Natural Resources*, CTR. FOR RESPONSIVE POL., <https://www.opensecrets.org/industries/indus.php> (last visited Nov. 29, 2015).

⁴¹⁶ *Energy/Natural Resources*, *supra* note 415; see *Citizens United v. FEC*, 558 U.S. 310 (2010).

⁴¹⁷ Rory Sullivan, *Introduction to CORPORATE RESPONSES TO CLIMATE CHANGE: ACHIEVING EMISSIONS REDUCTIONS THROUGH REGULATION, SELF-REGULATION AND ECONOMIC INCENTIVES* 5 (Rory Sullivan, ed., 2008).

⁴¹⁸ See Simone Pulver, *Making Sense of Corporate Environmentalism: An Environmental Contestation Approach to Analyzing the Causes and Consequences of the Climate Change Policy Split in the Oil Industry*, 20 ORG. & ENV'T 44, 52–55 (2007).

efforts, and fossil fuel companies generally include pages on climate change on their websites.⁴¹⁹ In addition, uptake of renewable energy sources and clean fuels by energy and transportation companies as an economically-sound business strategy is a key element of mitigation action at international, national, and state levels.⁴²⁰

Corporations operating in many other sectors of the economy are also becoming recognized as vital to effective energy transition and climate governance. All companies make energy consumption choices with greenhouse gas emissions implications, and a number of major corporations from a wide range of industries have shown leadership. For instance, as of November 30, 2015, a diverse group of 154 corporations had signed the American Business on Climate Change Pledge through which they supported “a strong Paris outcome” and “ongoing commitment to climate action.”⁴²¹ In the adaptation sphere, private businesses involved in infrastructure provision, development, and land use, as well as companies that provide property and disaster insurance, have an important part to play in helping to reduce communities’ vulnerability to climate change. Companies in the financial and investment sectors are emerging as key players in the regulatory complex that will be necessary to move towards low carbon societies. For example, several reports

⁴¹⁹ See Suzanne Goldenberg, *Exxon Knew of Climate Change in 1981, Email Says—But It Funded Deniers for 27 More Years*, GUARDIAN (July 8, 2015, 4:41 PM), <http://www.theguardian.com/environment/2015/jul/08/exxon-climate-change-1981-climate-denier-funding>; Shannon Hall, *Exxon Knew About Climate Change Almost 40 Years Ago*, SCI. AM. (Oct. 26, 2015), <http://www.scientificamerican.com/article/exxon-knew-about-climate-change-almost-40-years-ago/>. Exxon is under investigation by the Attorney General of New York regarding whether its statements to investors about climate risks comported with its internal research. See Justin Gillis & Clifford Krauss, *Exxon Mobil Investigated for Possible Climate Change Lies by New York Attorney General*, N.Y. TIMES (Nov. 5, 2015), <http://www.nytimes.com/2015/11/06/science/exxon-mobil-under-investigation-in-new-york-over-climate-statements.html>. For examples of company websites, see *Climate*, EXXONMOBIL, <http://corporate.exxonmobil.com/en/current-issues/climate-policy> (last visited Dec. 20, 2015); *Climate Change*, BP GLOBAL, <http://www.bp.com/en/global/corporate/sustainability/the-energy-future/climate-change.html> (last visited Dec. 20, 2015); *Climate Change and Energy Transitions*, SHELL OIL, <http://www.shell.com/sustainability/environment/climate-change.html> (last visited Dec. 20, 2015).

⁴²⁰ For example, when controversy erupted over companies with significant fossil fuel assets or investments sponsoring the Paris climate change negotiations, they responded by highlighting investments in renewables and moved away from coal. See Tim McDonnell, *The Fossil Fuel Industry Is Helping to Bankroll the Paris Climate Talks*, WIRED (Dec. 2, 2015, 5:12 PM), <http://www.wired.com/2015/12/the-fossil-fuel-industry-is-helping-bankroll-the-paris-climate-talks/>.

⁴²¹ Press Release, Office of the Press Sec’y, *White House Announces Additional Commitments to the American Business Act on Climate Pledge*, WHITE HOUSE (Nov. 30, 2015), <https://www.whitehouse.gov/the-press-office/2015/11/30/white-house-announces-additional-commitments-american-business-act>. However, very few major utilities are in this group of companies. *Id.*; Alejandro Davila Fragoso, *Why Have So Few Utilities Joined the White House’s Climate Change Pledge?*, CLIMATE PROGRESS (Dec. 9, 2015, 9:52 AM), <http://thinkprogress.org/climate/2015/12/09/3729789/top-utilities-ignore-obama-climate-pledge/>.

have been released on the so-called “carbon bubble”: the sudden loss in value of fossil fuel assets predicted to result from international constraints on carbon emissions.⁴²² Such developments are leading to growing pressure on corporations to improve disclosure of climate-related risk to shareholders and investors, and for institutional investors, such as pension funds and banks, to divest themselves of fossil fuel assets.⁴²³

Increasingly, many companies are aware of the risks that climate change poses to their businesses,⁴²⁴ and some are beginning to take proactive measures to position themselves to minimize climate-related losses and to take advantage of competitive opportunities offered by the growth of the clean economy. For this group of companies, partisanship does not seem to play a significant role in their decisions to embrace climate-related measures. Rather, private sector climate action is promoted as good for companies’ financial bottom line. Like Cuba Gooding, Jr.’s character in the movie *Jerry McGuire*, the call is to “Show Me the Money!” Put another way, what makes the corporate setting a good non-partisan space for climate action—the lobbying activities and political donations of numerous energy companies notwithstanding—is that in general companies are motivated to do things that improve their financial bottom line. Where initiatives to implement clean

⁴²² CARBON TRACKER INITIATIVE, UNBURNABLE CARBON—ARE THE WORLD’S FINANCIAL MARKETS CARRYING A CARBON BUBBLE? (2012), <http://www.carbontracker.org/wp-content/uploads/2014/09/Unburnable-Carbon-Full-rev2-1.pdf>; CARBON TRACKER INITIATIVE ET AL., UNBURNABLE CARBON 2013: WASTED CAPITAL AND STRANDED ASSETS (2013), <http://carbontracker.live.kiln.it/Unburnable-Carbon-2-Web-Version.pdf>; SIMON REDMOND & MICHAEL WILKINS, STANDARD & POOR’S RATINGS SERVS., WHAT A CARBON-CONSTRAINED FUTURE COULD MEAN FOR OIL COMPANIES’ CREDITWORTHINESS (2013), <http://www.carbontracker.org/wp-content/uploads/2014/09/SnPCT-report-on-oil-sector-carbon-constraints-Mar0420133.pdf>; PAUL SPEDDING ET AL., HSBC BANK PLC GLOBAL RESEARCH, OIL & CARBON REVISITED: VALUE AT RISK FROM ‘UNBURNABLE’ RESERVES 4 (2013), <http://daily.swarthmore.edu/wp-content/uploads/2013/02/HSBCOilJan13.pdf>.

⁴²³ An example of this approach is the fossil fuels divestment campaign being run by 350.org. See FOSSIL FREE, <http://gofossilfree.org/> (last visited Nov. 29, 2015).

⁴²⁴ See WORLD ECONOMIC FORUM, GLOBAL RISKS 2014, at 13 (9th ed. 2014) (ranking failure of mitigation measures fifth and extreme weather events sixth highest risks of concern); CDP S&P 500 CLIMATE CHANGE REPORT 2013, at 4–5 (2013), <https://www.cdp.net/cdpresults/cdp-global-500-climate-change-report-2013.pdf> (noting 77% of the 334 respondents disclosed exposure to climate change-related risks, up from 61% the previous year); Press Ass’n, *Rising Number of Top Firms Believe Climate Change Is Threat to Business*, GUARDIAN (Sept. 12, 2012, 1:30 AM), <http://www.theguardian.com/environment/2012/sep/12/climate-change-business-cdp> (noting that of the 379 companies that responded to the Global 500 survey, “[m]ore than one-third (37%) saw the physical risks of a changing climate as a real and present danger, up from 10%” in 2011; “81% identified climate change risks to their business operations, supply chains, and plans, up from 71%” in 2012).

energy behavior align with such economic incentives, this can create a powerful momentum for corporate action to address climate change.

An example of this approach—coupling a call for corporate action with a disaster preparedness framing—is “The Risky Business Project.” This non-partisan, independent coalition of U.S. business and policy leaders—including former New York City Mayor Michael Bloomberg and former U.S. Treasury Secretary Henry Paulson—works to highlight the risks climate change poses for U.S. enterprise.⁴²⁵ In an open letter to the business community published in the *Wall Street Journal* in June 2014, the group called for awareness of the impacts of climate change as a necessity of “[p]roper risk management.”⁴²⁶ To further this goal, it commissioned the Rhodium Group to conduct a risk assessment of the potential economic consequences of following a “business as usual” approach to climate change for each region of the United States and for selected sectors of the economy. As Michael Bloomberg explained,

Damages from storms, flooding, and heat waves are already costing local economies billions of dollars—we saw that firsthand in New York City with Hurricane Sandy. With the oceans rising and the climate changing, the Risky Business report details the costs of inaction in ways that are easy to understand in dollars and cents—and impossible to ignore.⁴²⁷

For companies in the insurance and reinsurance sector, the nature of their business makes them particularly susceptible to calls for greater attention to the economic risks of neglecting climate change. Not only are insurance companies generally risk averse, but they also have much to lose (and possibly something to gain)⁴²⁸ from their front line exposure to the physical risks climate change poses for property and infrastructure. The industry as a whole has been one of the most proactive sectors in addressing adaptation issues and urging governments to do so also.⁴²⁹ Increases in the number, cost, and variability of disaster and weather-related losses in the last decade have

⁴²⁵ See *American Business Must Act to Reduce Climate Risk*, RISKY BUS. (June 17, 2014), <http://riskybusiness.org/blog/american-business-must-act-to-reduce-climate-risk>.

⁴²⁶ For the text of the open letter, see *id.*

⁴²⁷ RISKY BUSINESS PROJECT, RISKY BUSINESS: THE ECONOMIC RISKS OF CLIMATE CHANGE IN THE UNITED STATES (June 2014), http://riskybusiness.org/site/assets/uploads/2015/09/RiskyBusiness_Report_WEB_09_08_14.pdf.

⁴²⁸ For instance, climate change may offer opportunities to develop new sorts of products to manage climate risk and variability.

⁴²⁹ Sean B. Hecht, *Insurance, in THE LAW OF ADAPTATION TO CLIMATE CHANGE: U.S. AND INTERNATIONAL ASPECTS* 511 (Michael B. Gerrard & Katrina Fischer Kuh eds., 2012).

convinced some insurance companies, reinsurers, and their trade associations of the need to incorporate climate change into their strategic planning.⁴³⁰ Other insurance companies—such as multinational reinsurer, the Swiss Re Group—have gone a step further, taking measures to reduce their corporate carbon footprint in addition to measures designed to reduce their future climate-related losses. In 2003, Swiss Re launched a “Greenhouse Neutral Programme” that aimed to reduce greenhouse gas emissions by 15% per employee by 2013 and to offset remaining emissions through the purchase of high-quality carbon credits. This emissions reduction goal was achieved six years early in 2007, and the company has since achieved greenhouse gas reductions in its operations of over 50%.⁴³¹

While many companies do not (yet) perceive the business risks associated with climate change impacts as significant enough to prompt action on the issue,⁴³² regulatory risks and associated economic costs from imminent or potential climate or clean energy measures are increasingly given greater attention. Reports prepared by investor group “the Carbon Disclosure Project” (CDP) evidence this trend. For example, the CDP S&P 500 Report for 2013, surveying corporate climate responses across top U.S. companies, found that in the context of steps taken by the Obama Administration to regulate emissions companies displayed “a significantly more mature level of climate management—as well as a drive to lead among peers.”⁴³³ Another report issued by CDP in late 2013 found that twenty-nine major publicly traded companies based or operating in the United States across a variety of sectors used an internal price on carbon pollution in their business planning, ranging from \$6 to \$60 per ton of carbon dioxide equivalent. Most companies covered by the report—including large corporations such as Walt Disney, Google, Xcel Energy, Wal-Mart, Delta, Microsoft, and PG&E Corporation—stated that they expected the eventual emergence of a regulatory approach, of some form, to address climate change. Companies establishing an internal carbon price as

⁴³⁰ Evan Mills, *Insurance in a Climate of Change*, 309 SCI. 1040 (2005).

⁴³¹ *Swiss Re*, CLIMATE GROUP, <http://www.theclimategroup.org/who-we-are/our-members/swiss-re> (last visited Oct. 12, 2015).

⁴³² GARETH JOHNSTON, DONOVAN BURTON & MARK BAKER-JONES, NAT'L CLIMATE CHANGE ADAPTATION RESEARCH FACILITY, CLIMATE CHANGE ADAPTATION IN THE BOARDROOM (2013), <https://www.dlapiper.com/~media/Files/Service%20and%20sector%20recommended/climatechangeadaptationintheboardroom.pdf>; see also JASON WEST & DAVID BRERETON, NAT'L CLIMATE CHANGE ADAPTATION RESEARCH FACILITY, CLIMATE CHANGE ADAPTATION IN INDUSTRY AND BUSINESS: A FRAMEWORK FOR BEST PRACTICE IN FINANCIAL RISK ASSESSMENT, GOVERNANCE AND DISCLOSURE (2013), http://www98.griffith.edu.au/dspace/bitstream/handle/10072/54579/88671_1.pdf.

⁴³³ CDP S&P 500 CLIMATE CHANGE REPORT 2013, *supra* note 424, at 4.

part of their business models viewed this “as both an evaluation of risk and a business opportunity if they take steps to limit carbon pollution before others do.”⁴³⁴

Moreover, these trends do not seem to be limited to the United States. At the United Nations Climate Summit in New York in September 2014, one of the most significant outcomes was the support offered by 1,042 multinational corporations for international carbon pricing. Several of these companies, including Nestle, Unilever, and Philips, committed to introduce their own internal shadow carbon prices as a measure for reducing their carbon footprint.⁴³⁵ Perhaps more important than these large companies pricing carbon internally is the effect that this move is likely to have on their supply chains, which encompass many small and medium-sized businesses. Improving the resiliency of the private sector as a whole has the capacity to support the adaptation of populations to climate change worldwide and especially in developing countries where micro- and small businesses, rather than multinationals, tend to be the engines of economic growth and job creation.⁴³⁶

Corporate sector climate change and energy commitments continued in conjunction with the Paris climate change negotiations. For example, twenty-eight major investors—including Bill Gates (Microsoft), Mark Zuckerberg (Facebook), and Jeff Bezos (Amazon)—in collaboration with twenty governments launched “Mission Innovation” aimed at supporting energy research.⁴³⁷ In addition, more than a thousand non-state actors, including numerous businesses, have joined the Paris Pledge for Action, committing to help keep warming below two degrees Celsius.⁴³⁸

⁴³⁴ Major U.S. Companies Disclose Internal Prices on Carbon, Cite Risk from Climate Change and Extreme Weather, Business Opportunities, CDP (Dec. 5, 2013), <https://www.cdp.net/en-US/News/CDP%20News%20Article%20Pages/Major-US-companies-disclose-internal-prices-on-carbon.aspx> (quoting Tom Carnac, President of CDP North America).

⁴³⁵ Jennifer Morgan et al., *Analyzing Outcomes from the UN Climate Summit*, WORLD RES. INST. (Sept. 23, 2014), <http://www.wri.org/blog/2014/09/analyzing-outcomes-un-climate-summit>.

⁴³⁶ INT’L FIN. CORP., IFC JOBS STUDY: ASSESSING PRIVATE SECTOR CONTRIBUTIONS TO JOB CREATION AND POVERTY REDUCTION 6 (2013).

⁴³⁷ Marilyn Geewax, *Bill Gates and Other Billionaires Pledge to Take on Climate Change*, NPR (Nov. 30, 2015, 5:29 PM), <http://www.npr.org/sections/thetwo-way/2015/11/30/457900449/bill-gates-and-other-billionaires-pledge-to-take-on-climate-change>.

⁴³⁸ PARIS PLEDGE FOR ACTION, <http://www.parispledgeforaction.org/>.

The overall theme of readiness for a climate changed-future being considered by some companies as “a source of competitive advantage”⁴³⁹ is one echoed in interviews we have conducted with attorneys who work as corporate counsel. One lawyer who represented a large utility company described how his client saw benefit in increasing its renewable and natural gas portfolio in order to take advantage of business opportunities afforded by the increasing stringency of regulations for coal plants.⁴⁴⁰ From the other side of the fence, a lawyer working with an environmental group described how a lot of the things they were seeing from power companies and utilities in terms of fuel switching (coal to gas or renewables) were in some part “climate-driven,” but more often “it’s really the economics” that is the fundamental driver of behavioral shifts. Companies see opportunities to make money and follow them.⁴⁴¹

Beyond those companies most directly affected by climate change or potential regulatory measures, there is increasing interest in the role that companies in the finance and investment sectors play in advancing climate action. In the mid-2000s, a coalition of non-governmental organizations petitioned the Securities and Exchange Commission (SEC) to improve company disclosure rules relating to climate change risks facing businesses.⁴⁴² The SEC issued an interpretative guidance in 2010 which urges listed companies to disclose material climate-related risks to their businesses.⁴⁴³ Importantly, the SEC’s guidance extends beyond physical climate change risks to regulatory risks—both domestic and international—associated with compliance with climate regulatory requirements, indirect effects of regulation, or business trends such as decreased demand for carbon-intensive products. While climate-related disclosures by companies improved in the immediate

⁴³⁹ Gretchen Michals, *The Boardroom’s Climate Is Changing*, DIRECTORSHIP, Dec. 2009–Jan. 2010, at 14.

⁴⁴⁰ Interview with Participant 5, *supra* note 17.

⁴⁴¹ Telephone Interview with Participant 12, *supra* note 336.

⁴⁴² See Cal. Pub. Emps. Retirement Sys. et al., Petition for Interpretive Guidance on Climate Risk Disclosure, at 2 (2007), <http://www.sec.gov/rules/petitions/2007/petn4-547.pdf>; Letter from Cal. Pub. Emps. Ret. Sys. et al., to Florence E. Harmon, Acting Sec’y. of the SEC (June 12, 2008) (requesting Interpretive Guidance on Climate Risk Disclosure); British Columbia Investment Management Corporation et al., Supplemental Petition for Interpretive Guidance on Climate Risk Disclosure, at 3 (2008), <http://www.sec.gov/rules/petitions/2008/petn4-547-supp.pdf>. For another petition on point, see also Steven J. Milloy & Thomas J. Borelli, Free Enter. Action Fund, Petition for Interpretive Guidance on Business Risk of Global Warming Regulation (2007), <http://www.sec.gov/rules/petitions/2007/petn4-549.pdf>.

⁴⁴³ Commission Guidance Regarding Disclosure Related to Climate Change Release Nos. 33-910627, 34-61469, FR-82 (Feb. 2, 2010).

aftermath of the SEC ruling, this reform has not had the broader transformative change advocates had hoped for.⁴⁴⁴ One interviewee involved in the initial petition to the SEC reflected on the reasons for this:

The response actually wasn't that great, in part because companies do have trouble figuring out what is material and it does sort of run against their grain culturally. And I think the important thing is the time horizon that corporate managers are looking at tends to be shorter than the time horizon that where you can say, you know, it's clear if we have a bunch of refineries that are located in the Gulf of Mexico that may be affected by an increase in storm intensity or rise in sea levels, that may be a grave concern. But if you are looking for something in the next 2 or 3 or 4 years to tell investors about it may not.⁴⁴⁵

Shareholder and investor groups, along with some environmental groups, are now investigating additional avenues to pressure companies to improve disclosure around the risks climate change poses for their businesses and assets. Some U.S. groups have been active in initiating shareholder resolutions calling on companies to disclose how climate risk is being managed.⁴⁴⁶ Others have targeted institutional investors, such as pension funds, who often control substantial capital, including large investments in fossil fuel assets. The ultimate aim of these efforts, as one advocate explained, is to attack the financial bottom line of dirty energy companies by making fossil fuel investment economically unpalatable for large corporate investors:

The area where the traditional NGOs are very comfortable is stopping fossil fuel companies digging up nice parts of the world. That's where they've gone. A tree or a reef—let's go to court. And of course most of the time they lose but when they win it's champagne corks. But nothing ever changes. These companies are still looking for those opportunities and it just shifts risk to other parts of the globe. We

⁴⁴⁴ JIM COBURN & JACKIE COOK, CERES, COOL RESPONSE: THE SEC & CORPORATE CLIMATE CHANGE REPORTING 5 (Feb. 2014), <http://www.ceres.org/resources/reports/cool-response-the-sec-corporate-climate-change-reporting/>.

⁴⁴⁵ Telephone Interview with Participant 8, *supra* note 323.

⁴⁴⁶ *Shareholder Resolutions*, CERES, <http://www.ceres.org/investor-network/resolutions> (167 climate-related resolutions as of March 12, 2014; 42 withdrawn on basis that company will address); *ICCR's Shareholder Resolutions*, INTERFAITH CTR. ON CORP. RESP., <http://www.iccr.org/iccrs-shareholder-resolutions> (last visited Nov. 28, 2015).

think starving the capital—the oxygen if you like—is a much more solid strategy.⁴⁴⁷

These efforts are likely to continue to grow and show some promise in shifting corporate behavior.

While partisanship does not appear to be a significant barrier to motivating climate action by a wide range of corporations, other potential obstacles should not be underestimated. Principal among these is the continuing prevalence of short-term thinking in corporate boardrooms, focused on profit opportunities and shareholder returns. Indeed, some in the corporate law world remain skeptical of the capacity for private sector led change in climate policy. As one corporate lawyer put it, directors who attempt to pursue long-term climate-friendly measures

are far more susceptible to an action by their disgruntled shareholders if they disband some profitable part of their (dirty) business in the name of saving the planet. . . . [T]hose directors with “green” inclinations would quickly find themselves voted off boards or up before the court for breach of the fiduciary duty to make [shareholders] pots of money!⁴⁴⁸

As with the “small is beautiful” strategy described in the earlier section then, structural reframing of climate action as an economically beneficial course for companies can be a double-edged sword. Leader companies may well see the financial bottom-line benefits offered by a more thorough consideration of climate change in their internal decision-making processes and in the steps they take to reduce emissions and to improve the resilience of their supply chains. Others with a substantial economic stake in the fossil fuel economy may not be so easily persuaded. And the vast majority of companies remain, for the moment, somewhere in the middle: aware of the business risks posed by climate change but reluctant to take strong measures to change their practices and behavior. Nonetheless, the potential for transformative change originating from the corporate sector is significant, especially as financial and competitive benefits associated with early climate change action and transition away from dirty fuels become more apparent over time.

⁴⁴⁷ Skype Interview with Participant 25 (May 21, 2013). The advocate concluded by focusing on the liability issue, arguing that the asset owners rather than the regulators would likely end up being the ones to force risk management. *Id.*

⁴⁴⁸ Email from Participant 32 to Jacqueline Peel, Professor, Melbourne Law Sch. (June 11, 2014) (on file with author).

CONCLUSION: BENEFITS AND LIMITATIONS OF POLYCENTRIC, INCREMENTAL STRATEGIES

In this Article, we have essentially adopted a “do whatever it takes” attitude to advancing action on climate change and energy transition. If an appeal to address climate change does not work due to partisan barriers, try other more appealing framings. If Congress is not a realistic option for passing comprehensive climate legislation, try other, more amenable forums be they local authorities, courts, the executive branch, or the private sector.

However, as demonstrated through the Article’s application of psychological theory to practical cases studies, such an approach need not (and should not) simply be opportunistic. Substantive and structural reframing, particularly when used in combination, can be a powerful strategy for encouraging needed cooperation and circumventing roadblocks. The Article highlights the specific substantive and structural strategies that have been most effective in doing so.

There is, of course, now a whole academic literature that has developed to advocate the value of such polycentric approaches to climate regulatory development—we ourselves have made contributions to that literature and are persuaded of the value of multiscalar climate action. The recent conclusion of the international Paris Agreement offers new hope for ambitious global action to address climate change. But significant question marks remain over issues of domestic implementation in the United States, and the potential for international government-led efforts to close the gap between current levels of emissions and those scientists say are needed to prevent dangerous planetary warming. Were the Congress to pass bipartisan, comprehensive, and ambitious climate change legislation, we would be among the first out in the streets to celebrate this advance. But in the meantime, the strategies offered in this Article represent our pragmatic assessment—based on experience, expertise, and research—of the most effective strategies to make needed progress despite the energy partisanship that characterizes U.S. climate politics today.

From a more positive perspective, this Article can be viewed as a call to climate advocates not to be discouraged by the obstacles posed by the difficult political environment. There are viable ways around such barriers for those who are committed to making progress on climate and energy issues. These strategies have been employed successfully on the ground for decades, and thinking about them more systematically provides an opportunity to use them even better.

However, we are well aware in putting forward these strategies that they have their own inherent limits. They are necessarily decentralized and incremental. They tend to over-emphasize human values associated with climate resilience and the economic benefits of energy transition rather than other values. They are piecemeal and the sum of the parts may not be sufficient to add up to the required whole. They are often vulnerable to leadership change. And they are not foolproof: the goals of creating a clean energy economy and building disaster resilience will often align with broader climate protection goals but there may be controversial choices with difficult tradeoffs (e.g., ethanol as a biofuel or hard coastal armoring damaging neighboring properties) on the way.

We propose these strategies, not as a sufficient substitute for the bipartisan reconciliation and political will required to make meaningful large-scale commitments, but rather as important ways forward given the current realities. Our hope is that an open conversation that focuses on possibilities for agreement, and promising forums for making that agreement happen, can help spur that needed progress. These strategies are not intended as tricks, or to add to the vitriolic dialogue going both directions. Rather, we argue that it is time to think seriously and systematically about leverage points based on how we can agree and use them to “go together” as much as possible.