

THE PENDULUM SWINGS IN US ENERGY POLICY: WHERE NOW UNDER THE BIDEN ADMINISTRATION?

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Abstract

This contribution highlights the increasing energy policy swings in the U.S. by focusing on some of the political and legislative reasons for it. It also analyzes the policy swings initiated by the Trump Administration after the Obama Administration and by the Biden Administration after the Trump Administration.

1 Introduction

Before discussing the dramatic U-turns on energy and climate policy in the United States over the past decade and President Biden's agenda for energy and climate, I would like to recognize the important role that Professor Martha Roggenkamp has played in the development of energy law over her distinguished career in private practice and in academia. I have had the privilege of working closely with Martha as a member of the International Bar Association, Section on Environment, Energy, Resources and Infrastructure Law's (SEERIL) Academy Advisory Group on Energy (AAG) for most of the past decade. The AAG produces a book on energy law issues biennially that is published by Oxford University Press for

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SEERIL. As a long-time member of the AAG, Martha has contributed chapters to many of the AAG's 12 books and served as an editor for two of the books. She is seen by the AAG members as one of the leading experts worldwide on energy law and a highly respected colleague.

I have also collaborated with Martha in creating the University of Groningen—The George Washington University Law School Energy Law Program which allowed students from both schools to work together on important EU/US energy law issues. We are proud to have had the chance to partner with Martha and the University of Groningen on this program for several years and look forward to the launch of a new LL.M. dual degree program in Energy Law that will allow students to study at and earn degrees from both Universities. It has been an honor to learn from and work with Martha.

2 The Increasing Energy Policy Swings in the US

Turning now to the topic at hand. While some differences on energy policy have long existed between the Republican and Democratic parties and their leaders in the United States, there has been more common ground on energy policy than on environmental policy. Perhaps because energy policy and environmental policy have become more closely linked in the context of climate change, this situation has changed. It is hard to imagine more dramatic swings of political direction than what has occurred on energy and climate policy over the last decade from the Obama Administration to the Trump Administration and now to the Biden Administration. These changes have been triggered by a growing political divide since 2007 on the role of renewable energy, energy efficiency and climate change in the U.S. The U.S. Congress passed major energy legislation in 2005 and 2007 with support from both political parties, the first major energy legislation in over a decade at that time. The 2005 Energy Policy Act² signed by President George W. Bush required increasing use of renewable transportation fuels, provided tax incentives for renewable energy and energy efficiency, and established energy efficiency standards for federal facilities. It also provided new funding support for fossil fuels and incentives for the construction of nuclear power plants.³ The Energy Policy Act was followed just two years later by the Energy Independence and Security Act of 2007.⁴ The law focused on encouraging more production of renewable fuels; increased energy effi-

2 Energy Policy Act of 2005, Pub. L. 109-58.

3 See <http://large.stanford.edu/courses/2016/ph241/gaertner1/docs/rl33302.pdf>, accessed 11 January 2022.

4 Energy Independence and Security Act of 2007, Pub. L. 110-140.

ciency for buildings, vehicles, lighting, and appliances; and incentives for research on carbon capture.⁵ The two laws provided a legal foundation for new initiatives to advance renewable fuels, wind and solar energy production, and energy efficiency and conservation.

In 2009 during the early years of the Obama Administration, the U.S. House of Representatives, relying on a Democratic Party majority, passed by a vote of 219-212 the American Clean Energy and Security Act⁶ which would have created a greenhouse gas cap and trade program for the country. However, the bill never reached a floor vote in the Senate. With Republican majorities in the House of Representatives and the Senate beginning in 2011, no new climate legislation was adopted. Even with a Democratic majority today in the House of Representatives and a Senate with a 50-50 split that can be broken by the vote of Vice-President Harris, no major climate legislation is anticipated because policy legislation must attract a supermajority (60 votes out of 100) under current Senate rules to overcome what is none as a ‘filibuster’.⁷ Further, Congress has not adopted any major new legislation on energy efficiency since 2007. The partisan stalemate on new energy and climate legislation has meant that significant action on renewable energy and energy efficiency could only result from action taken by the executive branch either through rulemaking by agencies or through Executive Orders, both of which can be reversed by a new Presidential administration. And, in fact, that is what has occurred — President Obama used Executive Orders and new rules to drive renewable energy, energy efficiency and climate initiatives. President Trump’s avowed priority was the fossil fuel industry and loosening regulations. He reversed many of the Obama actions both by Executive Order and through new rules. Now President Biden has followed suit by calling for a reexamination of all of the Trump policies on energy and climate.

Rulemaking at the Federal Government level in the United States is governed by the Administrative Procedures Act⁸ that requires agencies to develop a detailed justification for a draft rule, publish the rule and the justification in a document known as the Federal Register to facilitate public comment, and take the public comments into account in adopting a final rule. This process can take from several months to a year or more to complete. A rule can be rescinded or replaced by a new rule but only if the rescission or

5 See <https://www.congress.gov/bill/110th-congress/house-bill/6>, accessed 11 January 2022.

6 American Clean Energy and Security Act, HR 2454 (2009).

7 For information on the history and the role of filibusters see <https://www.senate.gov/about/powers-procedures/filibusters-cloture.htm>, accessed 11 January 2022.

8 5 uscode ch. 5, subch. I § 500 et seq.

replacement rule is justified through the APA process. As a result, rulemaking is somewhat durable but is much more easily changed than Congressional legislation.

Executive Orders⁹ are formal orders issued by the President based on authority found in legislation. These orders direct Federal agencies to take or refrain from taking actions specified in the Order. Presidents since Theodore Roosevelt have relied on Executive Orders as an important governance tool.¹⁰ Executive Orders are not durable. Executive Orders can be rescinded by the President who issues the Order or by a subsequent President. Because Congress has not provided legislative direction since 2007 on some of the most important energy and climate issues, Presidents Obama, Trump and Biden have relied heavily on either agency rulemaking or Executive Orders to set the energy agenda for the country. This has resulted in truly dramatic swings in energy and climate policy over the past decade.

3 The Obama Administration

President Obama and his agency heads emphasized the threat of climate change and therefore looked carefully at authority under existing legislation such as the Clean Air Act,¹¹ and the 2005 and 2007 energy legislation to drive renewable energy and energy efficiency, and deal with climate change. President Obama's signature climate initiative, the Clean Power Plan,¹² would have required states to adopt plans to limit GHG emissions from power plants by requiring the power plants to make operational changes that would result in more efficient operation of the power plant, achieve higher levels of energy conservation among its customers, or utilize more renewable generation. The Clean Power Plan rule was based on an interpretation of the Clean Air Act enacted in 1970 and last amended in 1990 that did not contain specific provisions related to climate change. Not surprisingly, the Clean Power Plan rule was immediately challenged in court with the plaintiffs arguing that the rule was not authorized by the Clean Air Act. Despite an earlier ruling by the Supreme Court that greenhouse gases are 'pollutants' within the definition of the Clean Air Act¹³, the Supreme Court with a Trump appointed justice creating a conservative majority, suspended the Clean Power Plan rule pending a deci-

9 See <https://www.federalregister.gov/presidential-documents/executive-orders>, accessed 11 January 2022.

10 See <https://www.presidency.ucsb.edu/statistics/data/executive-orders>, accessed 11 January 2022.

11 Clean Air Act, 42 USC sec 7401 et seq.

12 See <https://www.nrdc.org/stories/how-clean-power-plan-works-and-why-it-matters>, accessed 11 January 2022.

13 *Massachusetts v. EPA*, 549 US 497 (2007).

sion by the Federal Court of Appeals for the District of Columbia on the legality of the rule. The Supreme Court decision was an unprecedented move by the Court to suspend a rule prior to a ruling by the Court of Appeals. As a result, the Clean Power Plan rule was never implemented. President Trump abandoned the Clean Power Plan for a new rule designated the Affordable Clean Energy rule that significantly softened requirements for power plants related to climate change.¹⁴

Another cornerstone of the Obama climate policy was enhanced fuel economy standards for automobiles and light trucks. During the early years of the Obama Administration, automobile companies were facing severe economic distress during the 2008 recession. As part of negotiations to provide economic support to some of these companies to avoid bankruptcies, the Obama Administration negotiated more stringent fuel economy standards for automobiles and light trucks that would meet standards proposed by California to reduce greenhouse gas emissions. In the US, California is the only state that can adopt more stringent fuel economy standards than those enacted by the Federal government. The so-called 'California Waiver'¹⁵ was included in the Clean Air Act recognizing both the serious air quality problems California caused by automobile emissions that California has long-experienced and the state's long-standing efforts to reduce these emissions.¹⁶ The negotiations resulted in an agreement that a new Federal vehicle fuel economy standard would satisfy the California requirement avoiding the possibility of separate state and Federal standards. The new emissions rule would eventually result in a corporate average fuel economy of over 54 miles per gallon.¹⁷ The standard became an especially prominent target of the Trump Administration for rollback, no doubt in part because of the Administration's desire to support the fossil fuel industry.

The Obama Administration also emphasized implementation of the 2007 Energy Independence and Security Act's authority to set appliance standards and energy efficiency requirements for lighting. This included setting an efficiency standard for lighting that was stringent enough that it would eliminate most incandescent bulbs in favor of other types of lighting such as LED bulbs.¹⁸ The Obama Administration furthermore

14 See <https://www.epa.gov/stationary-sources-air-pollution/proposal-affordable-clean-energy-ace-rule>, accessed 11 January 2022.

15 See <https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations>, accessed 11 January 2022.

16 See <https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations>, accessed 12 January 2022.

17 See <https://obamawhitehouse.archives.gov/the-press-office/2012/08/28/obama-administration-finalizes-historic-54-mpg-fuel-efficiency-standard>, accessed 12 January 2022.

18 See <https://www.utilitydive.com/news/trump-administration-finalizes-rejection-obama-lightbulb-efficiency-doe-standards/569566/>, accessed 12 January 2022.

adopted a rule limiting mercury emissions from coal-fired power plants¹⁹ and a rule limiting methane emissions on public lands from oil and gas operations.²⁰ It also developed guidance on calculating the social cost of carbon and on how greenhouse gas emissions should be considered in environmental impact reviews.²¹

In addition to the rules addressing energy and climate issues, the Obama Administration relied heavily on Executive Orders to direct Federal agency activities. Two of the most prominent are EO 13653 focused on ‘Preparing the United States for the Impacts of Climate Change’ and EO 13693 ‘Planning for Federal Sustainability in the Next Decade.’

- EO 13653
- directs Federal agencies to provide ‘authoritative, easily accessible, usable, and timely data, information, and decision-support tools on climate preparedness and resilience;
 - requires all agencies to develop and implement comprehensive plans that integrate consideration of climate change into agency operations and overall mission objectives;
 - creates a state, local and tribal task force on climate preparedness and resilience.

EO 13693 focuses on Federal leadership on sustainability and greenhouse gas reduction by requiring agencies to

- improve energy efficiency of data centers;
- use renewable energy for at least 10 percent of their building energy needs by October 2017 and at least 25 percent by October 2025;
- reduce fleet greenhouse gas emission from vehicles by not less than 30 percent by the end of 2025;
- establish greenhouse gas emissions reduction goals for scope 1, 2 and 3 emissions;
- reduce energy intensity for building by at least 2.5 percent each year through 2025
- achieve net zero energy demand for all new Federal buildings by 2030.

4 The Trump Administration

The absence of a specific legislative anchor for the Obama energy and climate rules and Executive Orders (or at least the asserted lack of such legislative authority by the Trump

19 See <https://www.nytimes.com/2020/04/16/climate/epa-mercury-coal.html>, accessed 12 January 2022.

20 See <https://www.edf.org/climate/epa-gutting-rules-protect-you-methane-pollution>, accessed 12 January 2022.

21 See https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc_tsd_final_clean_8_26_16.pdf, accessed 12 January 2022.

Administrative officials) resulted in a dramatic reversal of these policies in early 2017 when President Trump assumed the Presidency. Perhaps the most well-known of these policy reversals was withdrawing from the Paris Climate Agreement. President Obama treated the Paris Agreement as an ‘Executive Agreement’ that did not have the same binding effect on the United States as a treaty.²² If it had been considered a treaty, it would require the ‘advise and consent’ of the U.S. Senate under the Constitution which, given the Republican majority in the Senate at the time, likely could not have been achieved just as was the case with the Kyoto Protocol. Of course, lacking legislative approval, the Paris Agreement could be reversed by President Trump’s own executive action as happened within five months of President Trump taking office.

On March 28, 2017, just two months after taking office President Trump issued Executive Order 13783 ‘Promoting Energy Independence and Economic Growth’ which provided that it is ‘in the national interest to promote clean and safe development of our Nation’s vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation.’ Of course, the energy resources referred to in the Order were primarily oil, gas, and coal. The Order

- required an immediate review by agency heads of existing regulations that ‘potentially burden’ the development and use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with law;
- revoked Obama Executive Order 13653 (Preparing for the Impacts of Climate Change);
- rescinded several climate-related Presidential memoranda and reports;
- withdrew the Council on Environmental Quality guidance on considering climate change in environmental impact reviews;
- mandated a review of the Obama Clean Power Plan;
- required a review of the Social Cost of Carbon guidance document;
- directed reevaluation of rules on emissions from new oil and gas operations.

This EO was followed a year later by EO 13834 focusing on ‘Efficient Federal Operations’ that revoked Obama EO 13693 (Planning for Federal Sustainability) while committing to

²² The view that the Paris Agreement could be signed as an Executive Agreement was controversial with some commentators arguing it had treaty-like features See E. Kontorovich, ‘Exiting Paris: What the Climate Accord Teaches about the Features of Treaties and Executive Agreements’, 51 *Case Western Reserve J of Int’l Law* 102 (2019).

implement statutory energy and other sustainability requirements such as those in the Energy Policy Act and the Energy Independence and Security Act. The limited scope of this EO helps demonstrate the importance of legislation in preserving energy efficiency programs since the EO specifically indicates those programs should proceed while terminating programs established only by EOs or regulation. The notable difference from the Obama EO is that the action forcing timelines are missing from EO 13834.

In 2019 President Trump issued Executive Order 13868 that was designed to expedite infrastructure development oil, natural gas and coal. The Order required agencies to review wetlands dredge and fill permitting processes to ensure they do not unnecessarily slow down infrastructure projects such as pipeline construction and, in a rather unusual move, directed the Department of Labor to review rules covering retirement plans to determine if it is permissible for retirement plans to restrict investment in fossil fuel companies given their fiduciary obligations: a move designed to blunt the growing trend by pension funds to disinvest in fossil fuels.²³

In addition to the EOs repealing Obama EOs and promoting the fossil fuel industry, the Trump Administration sought to repeal or alter many of the energy efficiency and climate rules and guidance documents adopted during the Obama Administration. These changes included

- weakening the Obama Administration fuel economy standards for automobiles and light trucks;
- revoking California's ability to set stricter tailpipe emissions standards;
- withdrawing the legal justification for the mercury emissions standard for coal-fired power plants;
- changing the cost-benefit analysis formula under the Clean Air Act making justifying new public health and climate protections harder;
- canceling a requirement that oil and gas companies report methane emission;
- weakening and partially repealing a rule limiting methane emissions on public lands;
- limiting a rule that required refineries to monitor pollution in surrounding communities;
- repealing rules designed to reduce leaking and venting of hydrofluorocarbons;
- directing agencies to stop using the Obama social cost of carbon in calculated costs and benefits of agency action;
- withdrawing guidance issued by the Council of Environmental Quality on how to take climate change into account in environmental impact assessment;

23 See <https://www.bloombergquint.com/business/trump-s-plan-to-block-pensions-from-esg-won-t-help-fossil-fuels>, accessed 12 January 2022.

- abandoning a policy that would have required tighter pollution requirements for offshore oil and gas operations;
- lifting a freeze on new coal mining leases on public lands;
- approving controversial permits for the construction of the Dakota Access and the Keystone pipelines;
- rescinding new water pollution regulations for hydraulic fracturing on public lands;
- withdrawing a requirement that Gulf of Mexico oil rig operators prove they can cover the cost of removing rigs at the end of their productive life;
- loosening offshore drilling safety regulations that were adopted to address the Deepwater Horizon explosion and spill;
- proposing opening most of the country's offshore waters to oil and gas exploration;
- revising rules governing environmental impact assessment in ways that would limit consideration of climate-related issues;
- revoking a rule that prevented coal companies from dumping mine debris into streams;
- repealing energy efficiency rules for new light bulbs;
- weakening energy efficiency standards for new dishwashers, furnaces, water heaters, washing machines and dryers; and
- freezing civil penalties for violations of energy efficiency standards that were set for a significant increase.²⁴

Some of the efforts to change rules, especially those pursued early in President Trump's tenure, were invalidated by courts for a variety of reasons including (1) failure to develop an adequate administrative record to justify revoking, modifying or supporting a rule resulting in the decision being invalidated as 'arbitrary and capricious' under the Administrative Procedures Act or (2) the rule as drafted was contrary to a law adopted by Congress. Some other Trump Administrative actions were remanded to the agency when a court found that the environmental impact assessment associated with the action was not adequate.²⁵ These court decisions indicate that rules can be more durable than Executive Orders since courts will invalidate attempted changes or rescission of rules that are

²⁴ See N. Popovich, L. Albeck-Ripka, and K. Pierre-Louis, "The Trump Administration Rolled Back More Than 100 Environmental Rules" (N.Y. Times, 20 January 2021) available at <https://www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks-list.html>, accessed 12 January 2022.

²⁵ For details on court actions on Trump Administration's rules and other decisions related to energy and environment see <https://policyintegrity.org/trump-court-roundup>, accessed 12 January 2022.

not adequately justified by the subsequent administration. Still, the scope of the Trump Administration changes in policy were dramatic.

The methods for driving change used by the Trump Administration to reverse course on energy policy and the court-imposed limits on those policy changes provide both a roadmap and a cautionary tale for the Biden Administration as it seeks to once again focus on energy efficiency, renewable energy and climate change.

5 The Biden Administration

The sum of all of Trump Administration energy and climate policy changes certainly demonstrate the desire of the Trump Administration to support the fossil fuel industry –its ‘energy dominance’ agenda—and its willingness to restrict environmental protections, energy efficiency considerations and support for renewable energy to achieve this objective. This is clearly not the policy of the Biden Administration. President Biden issued a series of Executive Orders beginning on his first day in office launching the process of reestablishing an emphasis on energy efficiency, renewable energy and climate change. The Administration is also moving to reverse rule and policy changes adopted during the Trump Administration but will have to be cautious about establishing an adequate record for rule changes and ensuring adequate environmental review is conducted for policy changes that are subject to environmental impact review. Since notice and comment rulemaking and environmental impact reviews can take several months to complete, many of the changes will take time to finalize.

The list of Biden Administration changes is extensive. Executive Order 13990 (Promoting Public Health and the Environment and Restoring Science to Tackle Climate Change) was issued 20 January 2021 (Inauguration Day). It promised to ‘listen to the science’; improve public health and protect our environment; ensure access to clear air and water; limit exposure to dangerous chemicals and pesticides; hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; reduce greenhouse emissions; bolster resilience to the impacts of climate change; restore and expand our national treasures and monuments; and prioritize both environmental justice and the creation of well-paying union jobs necessary to deliver these goals.²⁶

Executive Order 13990 required the heads of all agencies to ‘immediately review all existing regulations, orders, guidance documents, policies, and any other similar agency actions...promulgated, issued, or adopted between January 20, 2017, and January 2021’

²⁶ Executive Order 13990, sec 1.

(the entire period of Trump Administration). The Order specifically targets the following actions:

- The September 2020 rule on methane emissions from oil and gas operations;
- The 2019 and 2020 rules relaxing fuel efficiency standards for cars and light trucks;
- Several rules weakening appliance and building efficiency standards;
- Rules related to hazardous air emissions from coal-fired power plants.²⁷

The EO also directed the Secretary of Interior to impose a temporary moratorium on drilling in the Arctic National Wildlife Refuge citing inadequacies in the environmental impact review process;²⁸ created a working group whose task is to reinstate the social cost of carbon calculations for determining benefits from carbon reduction projects;²⁹ revoked the permit for construction of the XL pipeline that would have transported Canadian tar sands petroleum to refineries in the US;³⁰ revoked almost a dozen Trump Executive Orders and Presidential Memorandums related to energy, climate and environmental issues,³¹ and required a review of recently adopted changes to the Environmental Impact Assessment rules.³²

Seven days later, President Biden issued an Executive Order on climate change, an issue that the Trump Administration had essentially removed from consideration during the previous four years. EO 14008 focuses on 'Tackling the Climate Crisis at Home and Abroad,' establishing that it is US policy that 'climate considerations shall be an essential element of United States foreign policy and national security.'³³ The Order reinforced President Biden's commitment to reenter the Paris Agreement and to fully engage in the international process of reducing greenhouse gas emissions.³⁴ The EO also directs the Secretary of Defense to examine the national security implications of climate change.³⁵ The Order created a National Climate Task Force made up of the heads of all major Federal agencies³⁶ and required government procurement policy including for purchasing electricity and vehicles to be aligned with climate policies to the extent allowed under existing law, and to propose legislation to do so if needed. This included a goal of car-

27 Ibid sec 2.

28 Ibid sec 4.

29 Ibid sec 5

30 Ibid sec 6.

31 Ibid sec 7.

32 Ibid.

33 Executive Order 14008 sec 101.

34 Ibid sec 102.

35 Ibid.

36 Ibid sec 203.

bon-free electricity by 2050.³⁷ In addition, the Order placed a moratorium on new oil and gas leases on public lands and directed the White House Office of Management and Budget to conduct a study of fossil fuel subsidies.³⁸

Other key Executive Orders included a 27 January 2021 directive reestablishing the Council on Science and Technology designed to provide the Administration with better scientific information. The Council had been abolished by President Trump.³⁹ Also, Executive Order 14030 expressed a policy of advancing ‘consistent, clear, intelligible, comparable, and accurate disclosure of climate-related financial risk⁴⁰ and Executive Order 14037 on Strengthening American Leadership in Clean Cars and Trucks required the Administrator of the Environmental Protection Agency and the Secretary of Transportation to consider rulemaking to establish stronger fuel efficiency and greenhouse gas emissions standards for cars and trucks including heavy-duty trucks. President Biden also announced an aviation action plan on 9 September 2021 designed to result in reduction of aviation greenhouse gas emissions of 20 percent by 2030.⁴¹

6 Conclusion

While environmental and energy policy in the United States has vacillated depending upon whether the President is a Republican, a party that generally has been more supportive of industrial interests and the fossil-fuel sector, or a Democrat, a party that has typically emphasized energy conservation, renewable energy and climate concerns, the swings in policy have become much more dramatic over the past decade. Some of this volatility can be explained by the failure of Congress to adopt new framework energy and climate legislation over the past 14 years leaving energy and climate policy in the hands of the Executive Branch that must use less durable policy tools including rulemaking and Executive Orders. Part of the pendulum swings may also be explained by the dramatically different views among the electorate and the political parties on the importance (or even the existence) of climate change. Whatever, the driver, the contrast between the Obama, Trump and the Biden administrations could not be more stark. The rapidity of change from the Trump Administration to the Biden Administration has

37 Ibid sec 206

38 Ibid secs 208 and 209.

39 Executive Order 14007.

40 Executive Order 14030 sec 1.

41 See <https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/09/fact-sheet-biden-administration-advances-the-future-of-sustainable-fuels-in-american-aviation/>, accessed 31 October 2021.

been especially dramatic with President Biden issuing a sweeping Executive Order his first day in Office. While the policy change announced by the Biden Administration has been swift, actual changes in administrative rules will take some time. As discussed above, these changes require formal justification through notice and comment rulemaking that will require perhaps two years to accomplish if the missteps that resulted in the invalidation of several Trump era regulations are to be avoided.

These vacillations in public policy complicate decision making related to the future of many of the country's most important industries including the oil and gas, renewable energy, automobile manufacturing, electric generation, and others. This situation has perhaps shifted more influence and decision making to the private sector which has become increasingly concerned about the impacts of climate change both because of the potential impact on their own operations and because their customers have increasingly demanded they pay more attention to climate change and related energy issues. This increasing private sector concern has resulted in, among other things, a dramatic increase in demand for sourcing energy from wind and solar facilities. States and local governments have also taken the lead on energy efficiency and climate issues in many cases including programs such as the California greenhouse gas law,⁴² renewable energy and energy efficiency initiatives enacted by close to half of the states⁴³ and building code changes such as a ban on using natural gas in new buildings in San Francisco.⁴⁴ These state-based or local government-based initiatives help modulate the swings in Federal policy.

While bi-partisan agreement on new legislation related to energy and climate remains elusive (there is little hope of a new national climate law because of Republican opposition in the US Senate), the recently enacted bi-partisan, trillion dollar Congress Infrastructure Investment and Jobs Act⁴⁵ provides funding for important expansions of public transportation, creating a national electric vehicle charging network, climate adaptation projects with an emphasis on protecting underserved communities, and building out the electricity transmission grid that is critical to expansion of solar and wind energy production.⁴⁶ This legislation provides at least some more durability in energy and climate policy in the context of infrastructure projects. Passage of the legislation was no doubt

42 See AB 32, the California Global Warming Solutions Act of 2006.

43 See <https://www.eia.gov/todayinenergy/detail.php?id=32332>, accessed 12 January 2022.

44 See <https://insideclimatenews.org/news/13112020/san-francisco-natural-gas-ban/>, accessed 12 January 2022.

45 See <https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/06/fact-sheet-the-bipartisan-infrastructure-deal/>, accessed 12 January 2022.

46 See <https://thehill.com/policy/energy-environment/566003-five-key-energy-components-of-the-bipartisan-infrastructure-bill>, accessed 12 January 2022.

possible because the Act also provides for critically needed improvement in road, bridge, railroad, and airport infrastructure for which there has been bi-partisan support but little progress over the previous 20 years.

One final thought about our honoree is appropriate at this point. In contrast, to the quickly changing approaches to energy policy in the us, in our international energy law academic community there has been a steady voice for decades. That voice, of course, belongs to Martha Roggenkamp. Her work whether at Groningen, in collaborations with other universities, or with the IBA Section on Environment, Energy, Resources and Infrastructure Law's Academic Advisory Group on Energy has been a reliable source of careful analysis and innovative ideas. Thank you, Martha, for being that steady voice.