

# U.S. Domestic Climate Policy – Looking Back

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## Introduction

The U.S. climate policy story has four important, interrelated dimensions: action at the federal level, action at the state level, policy innovation, and technical innovation. The federal story is one of legislative failure but some executive and innovation success, while the state story is one of variegated progress. The country's policy innovations include the use of cap-and-trade programs, while its technical innovation is a product in part of an innovation ecosystem that can deliver disruptive outcomes at scale complemented by certain policies that encourage and enable this.

## Federal Level (Policy)

In 2009, with support from newly elected President Barack Obama, the House of Representatives (the lower half of the bicameral legislature) passed a sweeping cap-and-trade bill that would require economy-wide greenhouse gas emissions to decline 17 percent below 2005 levels by 2020 and 83 percent by 2050 (Broder, 2009). To become law, the bill would need to pass the upper legislative house, the Senate, where for the first time in thirty years, the left-leaning Democratic Party held the supermajority power needed to pass legislation against opposition from across the aisle (Hulse, 2009).

But the bill died in the Senate without so much as an up-or-down vote. Post-mortems written about the failure have identified a few key factors in its demise: Opposition from powerful fossil fuel and agriculture lobbies. Skepticism from energy-rich regions and their elected representatives. Near-uniform obstruction from the right-of-center Republican Party and the influential conservative media. A general lack of

passionate public or political support following a severe economic recession (Lizza, 2010).

The result has been a decade of legislative inaction. In the fall of 2010—just months after the climate bill's failure—the Republican Party, which is widely hostile to the science behind climate change (Brenan & Saad, 2018), won control of the House of Representatives on a platform of reducing taxes, spending, and government control over free enterprise, effectively dashing the prospects of ambitious climate legislation (Zeleny, 2010). The Democratic Party would not again hold full legislative control for another ten years.

## *Executive Action*

With ambitious climate legislation off the table, the Obama administration turned to its executive-branch agencies to promulgate climate policy, issuing a broad suite of regulations over the ensuing years aimed at curbing greenhouse gas emissions from key sectors. These regulations typically expanded existing regulatory programs or envisioned statutory authority in new ways to tackle climate change, focusing on major-emitting sectors that were already closely regulated by administrative agencies. For instance:

1. The Department of Transportation, which administers a vehicle fuel-economy program that had laid dormant since the energy crises of the 1970s, and the Environmental Protection Agency, which regulates pollution from motor vehicles, jointly issued ambitious new standards requiring declines in vehicle carbon dioxide of approximately five percent annually. (Union of Concerned Scientists, 2017).

2. The Department of the Interior, which manages 500 million acres of federal land, paused its coal-leasing program and issued rules to limit methane leaking and flaring from oil-and-gas lessees' drilling operations (U.S. DOI, 2016).
3. The Environmental Protection Agency issued the Clean Power Plan, its program to reduce carbon pollution from the power sector to 32 percent below 2005 levels by 2030 (U.S. EPA, 2016).

But while these Obama-era regulations made some progress toward reducing the nation's carbon footprint, most did not last. A federal judiciary that is becoming increasingly hostile to regulatory delegation sometimes took issue with these new exercises of agency authority, crippling some key programs following fierce litigation campaigns by opponents. For instance, while the Clean Power Plan was hailed by supporters as a momentous achievement, it was derided by opponents—including Republican Party politicians and powerful business interests—for threatening the coal industry and the communities that rely on it (Davenport & Davis, 2015). Those opponents challenged the Clean Power Plan in court, ultimately persuading the nation's highest court to halt the program before it took effect (Liptak & Davenport, 2016).

#### *Reversal*

While judicial review limited the impact of climate regulations during President Obama's tenure, the election of Republican Donald Trump as president in 2016 has been their death knell. Because regulations are promulgated by executive agencies whose leaders are selected by the president, they are subject to rollback when a new presidential administration takes office. And once President Trump took office in early 2017, with the assistance of a Republican-controlled Senate, he placed opponents of climate regulation in key government positions. For instance, a state official who had led many of the legal challenges to Obama-era climate regulations was tapped to serve as the nation's top environmental regulator (Davenport, 2017). The chief executive of ExxonMobil became secre-

tary of state (Harris, 2017).

With a cabinet in place that opposed binding emissions limits—and an explicit directive from the new president to expand domestic energy production (Executive Office, 2017)—the Trump administration launched an anti-regulatory assault on the Obama administration's climate programs. Virtually all of the major Obama-era climate regulations were rolled back during President Trump's four-year term as part of his administration's broader attack on environmental protections (Popovich et al., 2020).

For instance, the Trump administration substantially rolled back the vehicle emission standards that the Obama administration put in place in 2012, requiring just 1.5 percent rather than 5 percent in annual tailpipe emission reductions. It ended the Obama administration's coal moratorium (Frazin, 2020) and opened new swaths of public land for oil-and-gas drilling (Lipton & Tabuchi, 2018). It reversed Obama-era regulations to prevent methane leakage from new and existing wells (Davenport, 2020). And it formally withdrew the Clean Power Plan and replaced it with a toothless alternative that barely limits carbon pollution from power plants (Friedman, 2019).

All in all, the Trump administration's rollbacks have forgone at least two gigatons of greenhouse gas emission reductions that were called for under those Obama-era rules, dealing a dramatic blow to years-long regulatory efforts to reduce carbon pollution (Pitt et al., 2020). While some of these rollbacks are likely to be undone eventually by either the federal courts or the Biden administration (on the final day of the Trump administration, in fact, a federal court vacated the withdrawal of the Clean Power Plan, creating even more uncertainty for the future of that program), the excess emissions occurring while they remain in effect cannot be reversed.

More than a decade after the federal government was on the verge of passing sweeping climate legislation, few ambitious emission standards are now on the books at this level.

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## State Level

The story at the state level is somewhat more positive. A number of states enacted climate mandates that are far more ambitious and aggressive than federal policies. Twenty-three states (nearly half the 50 total) have adopted greenhouse gas emission targets, which vary in terms of timing, stringency, and enforceability (CCESa). California, home to nearly one-eighth of the U.S. population, has been amongst the most progressive states on climate policy, enacting an economy-wide cap-and-trade program in 2013 (linked to Quebec's program) that is on track to reduce the state's carbon emissions to 80 percent below 1990 levels by 2050 (CCESb). Another eleven states (including populous states such as New York, New Jersey, and Virginia) jointly administer a cap-and-trade program for the power sector known as the Regional Greenhouse Gas Initiative<sup>1</sup>, which has reduced carbon emissions from regulated power plants by 47 percent since the program's 2009 launch (RGGI). And 29 states have implemented renewable portfolio standards, which require a set percentage of the states' electricity to derive from renewable sources (CCESa).

While these state-level policies have made an important impact—and will have a greater effect over time as emission targets become more ambitious—there are legal limits to what states can accomplish without federal regulation (Coglianese & Starobin, 2018). While states can reduce emissions within their jurisdictions, their control over national and global energy supply is limited, since the federal government controls foreign policy, interstate and international transmission pipelines, and vast energy reserves. The federal government has also closed off some critical areas of climate regulation to local control. And states controlled by more conservative governments—including many in energy-rich regions—have mostly declined to impose stringent emission controls.

## Policy Innovation

In addition to state and federal controls, the U.S. climate story is also one of policy innovations. Policy instruments that have originated or developed in the United States include market instruments (carbon taxes, emissions trading); regulation (dictating carbon reducing technologies and processes); subsidies (grants, tax expenditures that reward reduction), technology and R&D (finding better and cheaper solutions); and voluntary agreements (companies commit to meeting emission reduction targets).

An important early U.S. policy innovation that has been particularly important worldwide in reducing greenhouse gas emissions was the design and implementation of cap-and-trade programs. Specifically, in the early 1990s, federal law created a market-based instrument (emission trading) to reduce sulfur-dioxide emissions from the power sector.<sup>2</sup> Although this initial cap-and-trade program was not for greenhouse gases, it has become the template for trading schemes that were designed to deliver, or guarantee, greenhouse gas emissions' reduction at state level in the U.S. (see above) and abroad, beginning with the European Union Emissions Trading System in 2005.

The U.S. is also a leader in the use of private action to reduce greenhouse gas emissions. In January 2021, for instance, General Motors announced its intention to phase out the internal combustion engine by 2035. Many prominent U.S. institutional investors—such as government pension funds and institutions of higher education—have also divested from the fossil-fuel industry. While many question the sufficiency of these voluntary actions, they do provide a signal that may help facilitate government action over time.

## Technical Innovation

The innovation ecosystem in the United States is unusual in that private investors are willing to invest billions of dollars, over a long period, in

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1 Regional Greenhouse Gas Initiative. Elements of RGGI. <https://www.rggi.org/program-overview-and-design/elements>

2 This fixed a shrinking absolute cap on emissions, permits were allocated to installations, and these could be traded, with the requirement that emitters hold sufficient permits at the end of the reporting period to cover their emissions. The result was reduction in emissions that far exceeded what the cap required, delivered at much lower costs than anticipated (Ellerman et al, 2000)

companies that have inspirational leadership and are likely to be major disruptors of incumbent businesses. Tesla, which has the ambition of disrupting the auto industry with electric cars, is valued in excess of \$600 billion. The federal government also provides tax breaks and funds research and development at scale.

Technical innovation was also key to important reductions in emission by the nation’s power sector. For instance, Mohlin et al. (2018) show how important such innovation (and supporting policies) were in explaining how renewables and fracking achieved reductions (4.8-6.9 percent) in greenhouse gas emissions from the power sector (Table 1).

Activity	Decline achieved (% of total)
Renewables (revolution in cost reduction)	2.3-3.3
Switch from coal to natural gas (key to the decline of coal in the US power sector)	2.5-3.6
Total	4.8-6.9

Table 1. Explaining Emissions Reduction in the US Power Sector, 2007-2013  
 Source: Mohlin et al. (2018).

This innovation has largely been spurred by federal policy. While Congress has not been able to agree on much regarding federal climate policy, it has allocated tens of billions of dollars in renewable energy research and development tax credits as part of bipartisan spending bills to stimulate the economy in both 2009 and 2020, and extended tax credits for solar and wind in 2015 (White House, 2016; Kaplan & Grandoni, 2010; Lacy, 2015). Largely as a result of these incentives, renewable energy funding has soared: Led by wind and solar, nationwide investment in renewable energy reached a record \$55 billion in 2019, approximately doubling annual totals from a decade earlier (Rathi & Hodges, 2020). Renewable energy production and consumption also increased nearly 50 percent during the same ten-year period (EIAa).

But the biggest shift in the U.S. energy market has been the rise of natural gas in place of coal (EIAb), as natural gas has gotten cheaper as a result of a boom in shale development through hydraulic fracturing (Gruenspecht, 2019). Because natural gas-fired power plants emit about half as much carbon per kilowatt hour as coal plants, the boom in gas production has produced a substantial decline in power-sector emissions (EIAc), though the extent to which that decline has been offset by corresponding increases in methane emissions from gas wells is hotly debated (Borunda, 2020).

All told, total U.S. emissions declined nearly 10 percent between 2005 and 2018, achieving more than half of the decline called for under the sweeping 2010 cap-and-trade legislation that did not pass (EPA, 2020). Imagine how much better we could have done with a coherent federal policy.

**Note**

This Chapter does not represent the position, if any, of NYU School of Law.

**References**

Borunda, A. (2020, Feb. 19). Natural Gas Is a Much ‘Dirtier’ Energy Source Than We Thought. *National Geographic*. [www.nationalgeographic.com/science/2020/02/super-potent-methane-in-atmosphere-oil-gas-drilling-ice-cores/](http://www.nationalgeographic.com/science/2020/02/super-potent-methane-in-atmosphere-oil-gas-drilling-ice-cores/)

Brenan, M., & Saad, L. (2018, Mar. 28). Global Warming Concern Steady Despite Some Partisan Shifts. *Gallup*. <https://news.gallup.com/poll/231530/global-warming-concern-steady-despite-partisan-shifts.aspx>

Broder, J.M. (2009, June 26). House Passes Bill to Address Threat of Climate Change. *N.Y. Times*. [www.nytimes.com/2009/06/27/us/politics/27climate.html](http://www.nytimes.com/2009/06/27/us/politics/27climate.html)

Center for Climate and Energy Solutions. State Climate Policy Maps. [www.c2es.org/content/state-climate-policy/](http://www.c2es.org/content/state-climate-policy/). [“CCESa”].

- Center for Climate and Energy Solutions. California Cap and Trade. [www.c2es.org/content/california-cap-and-trade/](http://www.c2es.org/content/california-cap-and-trade/). ["CCESb"].
- Chemnick, J. (2021, Jan. 7). How Climate Opponents Helped Pass a Historic Emissions Law. *E&E News*. [www.eenews.net/climatewire/2021/01/07/stories/1063721975?utm\\_campaign=edition&utm\\_medium=email&utm\\_source=eenews%3Aclimatewire](http://www.eenews.net/climatewire/2021/01/07/stories/1063721975?utm_campaign=edition&utm_medium=email&utm_source=eenews%3Aclimatewire)
- Coglianesi, C., & Starobin, S. (2018, Apr. 17). *The Legal Limits to State Climate Action*. Kleinman Center for Energy Policy. <https://kleinmanenergy.upenn.edu/podcast/the-legal-limits-to-state-climate-action/>
- Davenport, C. (Feb. 17, 2017). Senate Confirms Scott Pruitt as E.P.A. Head. *N.Y. Times*. [www.nytimes.com/2017/02/17/us/politics/scott-pruitt-environmental-protection-agency.html](http://www.nytimes.com/2017/02/17/us/politics/scott-pruitt-environmental-protection-agency.html)
- Davenport, C. (2020, Aug. 13). Trump Eliminates Major Methane Rule, Even as Leaks Are Worsening. *N.Y. Times*. [www.nytimes.com/2020/08/13/climate/trump-methane.html](http://www.nytimes.com/2020/08/13/climate/trump-methane.html)
- Davenport, C., & Davis, J.H. (2015, Aug. 3). Move to Fight Obama's Climate Plan Started Early. *N.Y. Times*. [www.nytimes.com/2015/08/04/us/obama-unveils-plan-to-sharply-limit-greenhouse-gas-emissions.html](http://www.nytimes.com/2015/08/04/us/obama-unveils-plan-to-sharply-limit-greenhouse-gas-emissions.html)
- Ellerman, A.D., Joskow, P.L., Schmalensee, R., Montero, J.-P., & Bailey, E.M. (eds.). (2000). *Markets for Clean Air: The U.S. Acid Rain Program*. Cambridge University Press.
- Energy Information Administration. Renewable Energy Production and Consumption by Source. [www.eia.gov/totalenergy/data/monthly/pdf/sec10\\_3.pdf](http://www.eia.gov/totalenergy/data/monthly/pdf/sec10_3.pdf) ["EIAa"].
- Energy Information Administration. (2020, May 11). U.S. Coal-Fired Electricity Generation in 2019 Falls to 42-Year Low. [www.eia.gov/todayinenergy/detail.php?id=43675](http://www.eia.gov/todayinenergy/detail.php?id=43675) ["EIAb"].
- Energy Information Administration. (2020, Sept. 30). U.S. Energy-Related Carbon Dioxide Emissions, 2019. [www.eia.gov/environment/emissions/carbon/#:~:text=The%20decline%20in%20CO2%20emissions,with%202018%20\(Figure%204\)](http://www.eia.gov/environment/emissions/carbon/#:~:text=The%20decline%20in%20CO2%20emissions,with%202018%20(Figure%204).). ["EIAc"].
- Executive Office of the President. (2017). Promoting Energy Independence and Economic Growth. 82. Fed. Reg. 16,093.
- Frazin, R. (2020, Feb. 26). Trump Administration Resuming Coal Leasing on Public Lands. *The Hill*. <https://thehill.com/policy/energy-environment/484854-trump-administration-resuming-coal-leasing-on-public-lands>
- Friedman, L. (2019, June 19). E.P.A. Finalizes Its Plan to Replace Obama-Era Climate Rules. *N.Y. Times*. [www.nytimes.com/2019/06/19/climate/epa-coal-emissions.html](http://www.nytimes.com/2019/06/19/climate/epa-coal-emissions.html)
- Gruenspecht, H. (2019). The U.S. Coal Sector: Recent and Continuing Challenges. *Brookings*. [www.brookings.edu/wp-content/uploads/2019/01/H.Gruenspecht\\_U.S.-Coal-Sector\\_Final\\_Jan\\_20191.pdf](http://www.brookings.edu/wp-content/uploads/2019/01/H.Gruenspecht_U.S.-Coal-Sector_Final_Jan_20191.pdf)
- Harris, G. (2017, Feb. 1). Rex Tillerson Is Confirmed as Secretary of State Amid Record Opposition. *N.Y. Times*. [www.nytimes.com/2017/02/01/us/politics/rex-tillerson-secretary-of-state-confirmed.html](http://www.nytimes.com/2017/02/01/us/politics/rex-tillerson-secretary-of-state-confirmed.html)
- Hulse, C. (2009, July 1). What's So Super About a Supermajority? *N.Y. Times*. [www.nytimes.com/2009/07/02/us/politics/02cong.html](http://www.nytimes.com/2009/07/02/us/politics/02cong.html)
- Kaplan, S. & Grandoni, D. (2020, Dec. 21). Stimulus Deal Includes Raft of Provisions to Fight Climate Change. *Washington Post*. [www.washingtonpost.com/climate-solutions/2020/12/21/congress-climate-spending/](http://www.washingtonpost.com/climate-solutions/2020/12/21/congress-climate-spending/)
- Lacy, S. (2015, Dec. 18). Congress Passes Tax Credits for Solar and Wind: 'Sausage-Making at Its Most Intense.' *Greentech Media*. [www.greentechmedia.com/articles/read/breaking-house-passes-1-1-trillion-spending-bill-with-renewable-energy-tax](http://www.greentechmedia.com/articles/read/breaking-house-passes-1-1-trillion-spending-bill-with-renewable-energy-tax)
- Liptak, A., & Davenport, C. (2016, Feb. 9). Supreme Court Deals Blow to Obama's Efforts to Regulate Coal Emissions. *N.Y. Times*. [www.nytimes.com/2016/02/10/us/politics/supreme-court-blocks-obama-epa-coal-emissions-regulations.html](http://www.nytimes.com/2016/02/10/us/politics/supreme-court-blocks-obama-epa-coal-emissions-regulations.html)
- Lipton, E., & Tabuchi, H. (2018, Nov. 27). Energy Speculators Jump on Chance to Lease Public Land at Bargain Rates. *N.Y. Times*. [www.nytimes.com/2018/11/27/business/energy-speculators-public-land-leases.html](http://www.nytimes.com/2018/11/27/business/energy-speculators-public-land-leases.html)
- Lizza, R. (2010, Oct. 3). As the World Burns: How the Senate and the White House Missed Their Best Chance to Deal With Climate Change. *The New Yorker*. [www.newyorker.com/magazine/2010/10/11/as-the-world-burns](http://www.newyorker.com/magazine/2010/10/11/as-the-world-burns)
- Mohlin, Kristina, Jonathan R. Camuzeaux, Adrian Muller, Marius Schneider, and Gernot Wagner. 2018. Factoring in the forgotten role of renewables in CO2 emission trends using decomposition analysis. *Energy Policy* 116: 290-296.
- Pitt, H., Larsen, K., & Young, M. (2020, Sept. 17). *The Undoing of US Climate Policy: The Emissions Impact of Trump-Era Rollbacks*. Rhodium Group. [https://rhg.com/research/the-rollback-of-us-climate-policy/?utm\\_campaign=Hot%20News&utm\\_medium=email&\\_hsmi=95544102&\\_hsenc=p2ANqtz-80e2Dxds18Fh-dj11rfCyR3n3r0LhR1e19P9eGmotYR31-yX7Uj00NfbOYWBF4-PU\\_rZD1JeZHiX\\_ImyRgQYyoPPvw-g&utm\\_content=95544102&utm\\_source=hs\\_email](https://rhg.com/research/the-rollback-of-us-climate-policy/?utm_campaign=Hot%20News&utm_medium=email&_hsmi=95544102&_hsenc=p2ANqtz-80e2Dxds18Fh-dj11rfCyR3n3r0LhR1e19P9eGmotYR31-yX7Uj00NfbOYWBF4-PU_rZD1JeZHiX_ImyRgQYyoPPvw-g&utm_content=95544102&utm_source=hs_email)
- Popovich, N., Albeck-Ripka, L., & Pierre-Louis, K. (updated 2020, Nov. 10). The Trump Administration Is Reversing More than 100 Environmental Rules. Here's the Full List. *N.Y. Times*. [www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks-list.html](http://www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks-list.html)
- Rathi, A., & Hodges, J. (2020, Jan. 16). Even Under Trump, U.S. Renewable Investment Hit a Record in 2019. *Bloomberg*. [www.bloomberg.com/news/articles/2020-01-16/even-under-trump-u-s-renewable-investment-hits-a-record](http://www.bloomberg.com/news/articles/2020-01-16/even-under-trump-u-s-renewable-investment-hits-a-record)
- Union of Concerned Scientists. (updated 2017, Dec. 6). A Brief History of US Fuel Efficiency Standards. [www.ucsusa.org/resources/brief-history-us-fuel-efficiency](http://www.ucsusa.org/resources/brief-history-us-fuel-efficiency)
- U.S. Department of the Interior (2016, Jan. 15). Secretary Jewell Launches Comprehensive Review of Federal Coal Program. [www.doi.gov/pressreleases/secretary-jewell-launches-comprehensive-review-federal-coal-program](http://www.doi.gov/pressreleases/secretary-jewell-launches-comprehensive-review-federal-coal-program)
- U.S. Environmental Protection Agency (updated 2016, June 27). Fact Sheet: Overview of the Clean Power Plan. <https://19january2017snapshot.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan.html>
- U.S. Environmental Protection Agency (2020). Inventory of U.S. Greenhouse Gas Emissions and Sinks. [www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf](http://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf)
- White House Office of the Press Secretary. (2016, Feb. 25). Fact Sheet: The Recovery Act Made the Largest Single Investment in Clean Energy in History, Driving the Deployment of Clean Energy, Promoting Energy Efficiency, and Supporting Manufacturing. <https://obamawhitehouse.archives.gov/the-press-office/2016/02/25/fact-sheet-recovery-act-made-largest-single-investment-clean-energy>
- Zeleny, J. (2010, Nov. 2). G.O.P. Captures House, But Not Senate. *N.Y. Times*. [www.nytimes.com/2010/11/03/us/politics/03elect.html](http://www.nytimes.com/2010/11/03/us/politics/03elect.html)

**Suggested citation**

Sarinsky, M. (2021). U.S. Domestic Climate Policy – Looking Back. *E&ERE Magazine*, 11.