CLIMATE XCHANGE

How States Can Fill the Gaps

APRIL 10TH
1:00PM–2:15PM ET

Introduction

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CLIMATE X CHANGE
[SCPN]

State Climate Policy Network

Network of **15,000+**

- ➔ State and local elected officials
- ➔ NGO advocates
- ➔ Researchers
- ➔ State agency staffers
- ➔ Organizers and activists
- ➔ Business leaders

... working on state climate policy

www.climate-xchange.org/network

CLIMATE XCHANGE [SCPN]

Pro Bono Policy Assistance

We specialize in state climate policy design and analysis.
Reach out to kristen@climate-xchange.org with your requests on:

- **Example states** and **model rules** for a given policy
- **Gap analysis** of your state's climate policy landscape
- **Connections** to other actors working on similar issues

CLIMATE X CHANGE [SCPN]

EPA's Climate Rollbacks and How States Can Fill the Gaps

Janet McCabe
Former Deputy Administrator of the U.S. EPA

Climate XChange Staff

Agenda

1. A Note on *State Overreach* EO
2. First Impressions from the Former EPA Deputy Administrator
3. Survey of Proposed Rollbacks and State Responses
4. Q&A

A Timely Note on *State Overreach* EO

On Tuesday, the President signed an Executive Order directing the US Attorney General to target state and local climate and climate justice policies that the Administration believes represents some form of overreach.

Though the Order lists several potential targets, its application in practice remains to be seen.

The vast majority of state climate policy is unambiguously in states' rightful jurisdiction.

As we monitor the Administration's response, we urge our network not to grant this Order a chilling effect over our work.

Speaker

Janet McCabe

Former Deputy Administrator
U.S. Environmental Protection Agency

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Speakers

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Communications Manager

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EPA's Announcement: The Basics

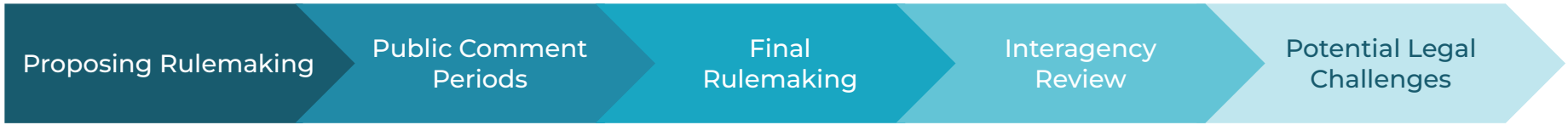
On March 12, EPA announced 31 actions, addressing:

- Power plant emissions, including regulations for GHGs and conventional pollutants
- Vehicle tailpipe emissions
- Oil and gas sector methane emissions
- HFC phasedown program
- 2009 GHG endangerment finding
- Social cost of carbon

....and much, much more.

EPA's Regulatory Process

EPA rulemakings go through several steps:



EPA publishes notice of proposed rule changes

All stakeholders can submit comments on the proposal

After considering public input, EPA publishes the final rule in the Federal Register

OMB assesses regulations with significant economic or regulatory impacts

Finalized actions may face legal challenges from affected stakeholders

Insights into the Timeline

An illustrative example from Trump 1.0: The Affordable Clean Energy Rule

- March 2017 – Trump signed an Executive Order to revisit the Obama-era Clean Power Plan (CPP)
- October 2017 – EPA proposed repeal of the CPP (with 1.5m public comments)
- December 2017 – EPA issued an Advanced Notice of Proposed Rulemaking on replacing the CPP (with 270k+ public comments)
- August 2018 – EPA published a proposed Affordable Clean Energy (ACE) rule (with 250k+ additional comments)
- June 2019 – EPA finalized the CPP repeal and the ACE Rule
- July 2019 – *American Lung Association v. EPA* filed
- January 19, 2021 – Trump's last full day in office – the D.C. Circuit Court vacated the ACE Rule

EPA Endangerment Finding: Background

- 2007's *Mass. v. EPA* required EPA to make a positive or negative endangerment finding for GHGs.
- 2009's endangerment finding later upheld in 2012 case at the D.C. Cir. Court of Appeals.
- 2022's *W. Virginia v. EPA* ruled that EPA could not regulate GHG's "outside the fence line," by, e.g., encouraging renewable development.
- IRA Title VI made revisions to the Clean Air Act that defined six GHGs as "air pollutants."
    - These definitions should provide EPA statutory authority to regulate GHGs in the future.

How Would Revoking the Endangerment Finding Work?

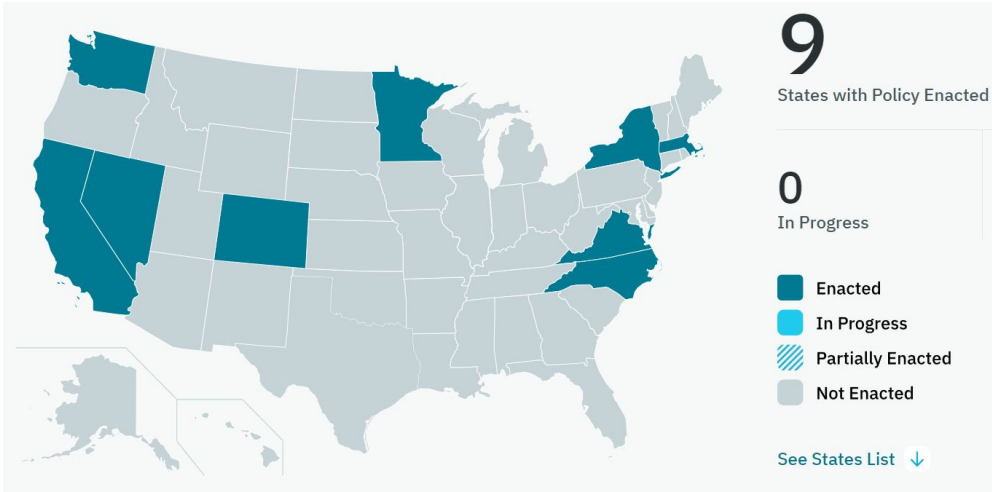
- Courts would **review a deeper, more robust body of scientific literature** in favor of anthropogenic climate change and attribution than in 2009.
- The reversal of *Chevron* deference may make courts more skeptical of EPA's arguments against the finding.
- EPA may pursue **substantive changes to GHG regs** while reconsidering the endangerment finding contemporaneously.
- If endangerment finding is revoked, EPA rules that used the finding as legal basis would be **faster and easier to rescind**.
- Under the IRA's CAA revisions, EPA would retain authority to regulate GHGs in the future, but benefits of strict regulation may be harder to justify.

Social Cost of Carbon (SCC): Background

- Key methodological tool in benefit-cost analysis of federal regulations of GHGs.
- Interagency Working Group (IWG) established $51/ton CO2 figure (under Obama admin)
- Trump 1.0 disbanded IWG, and subsequent agency estimates limited damages to US, raised discount rates to between 3% a 7% in order to arrive at SCC between $1 and $8/ton CO2.
- Biden reconvened IWG, but the group never approved a new SCC. EPA announced its own figure of $190/ton in 2023.
- Trump 2.0 disbanded IWG again, and order revision of SCC. Some agencies have temporarily reverted to 2003 OMB guidance pending that revision.

What States Can Do: **Adopt the SCC!**

- NY and IL use the SCC for the value of “zero-emission credits.”
- CO, MN, and WA require electric utilities use the SCC in resource planning.
- CA legislation requires regulators to incorporate the SCC in policy analysis.



States that have Adopted an SCC

What Can States Do: **Adjust the SCC!**

While waiting for EPA's 2023 SCC, New York adopted its own SCC in 2020, adjusting discount rates. Vermont subsequently adopted this figure.

Considerations:

- EPA's SCC doesn't incorporate all potential damages, such as tipping points.
- States may have to harmonize discount rates between SCC and other regulatory analyses.

	SC-CO_2 (*2020 dollars per metric ton of CO_2*)		
Emission Year	Near-term rate 2.5%	2.0%	1.5%
2020	120	190	340
2030	140	230	380
2040	170	270	430
2050	200	310	480
2060	230	350	530
2070	260	380	570
2080	280	410	600

EPA Report on The Social Cost of Greenhouse Gases, 2023

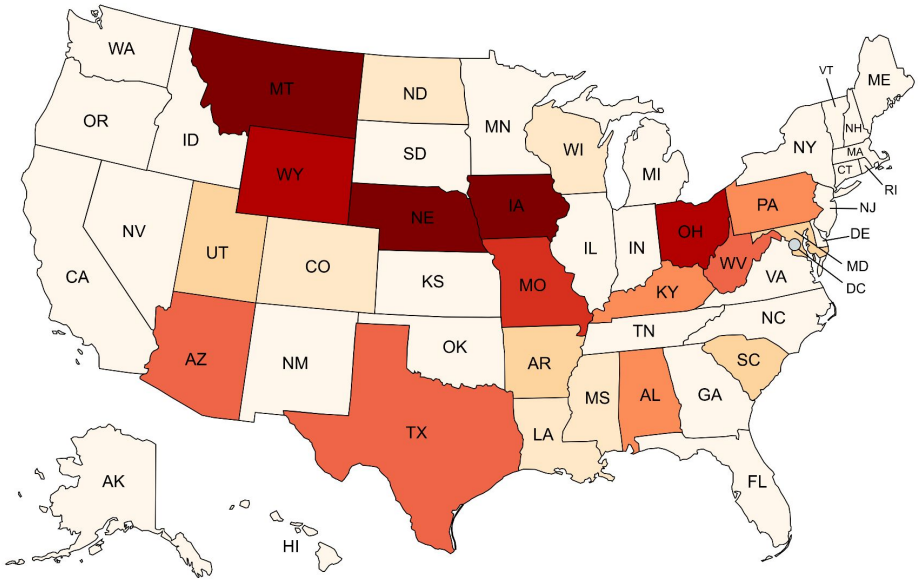
Clean Power Plan 2.0 Highlights

- Longest-lived coal plants (post-2039 operations) required to reduce emissions by 90%, largely through carbon capture and storage, by 2032.
- Natural gas peaker plants (<20% of the year operational) subject to cleaner fuel requirements.
- Natural gas baseload plants (>40% of the year operational) required to reduce emissions 90 percent by 2032.
- Widely expected that these requirements might spur early retirements of the dirtiest plants.

A Tennis Match: How We Got to CPP 2.0

- Obama's Clean Power Plan finalized in 2015.
- CPP stayed by the SCOTUS in 2016, setting stage for Trump's ACE Rule.
- Trump's ACE Rule adopted in 2019, along with CPP repeal.
- ACE rule and CPP repeal are vacated by D.C. Circuit in 2021, nominally putting the stayed CPP back into effect.
- SCOTUS rules on merits of CPP in 2022's *WV v. EPA*, calling out "major questions doctrine," and says regulation should not stray "outside the fence line."
- Biden's replacement for the ACE rule finalized in 2024.

Which States Reduce Emissions Most Under CPP 2.0?



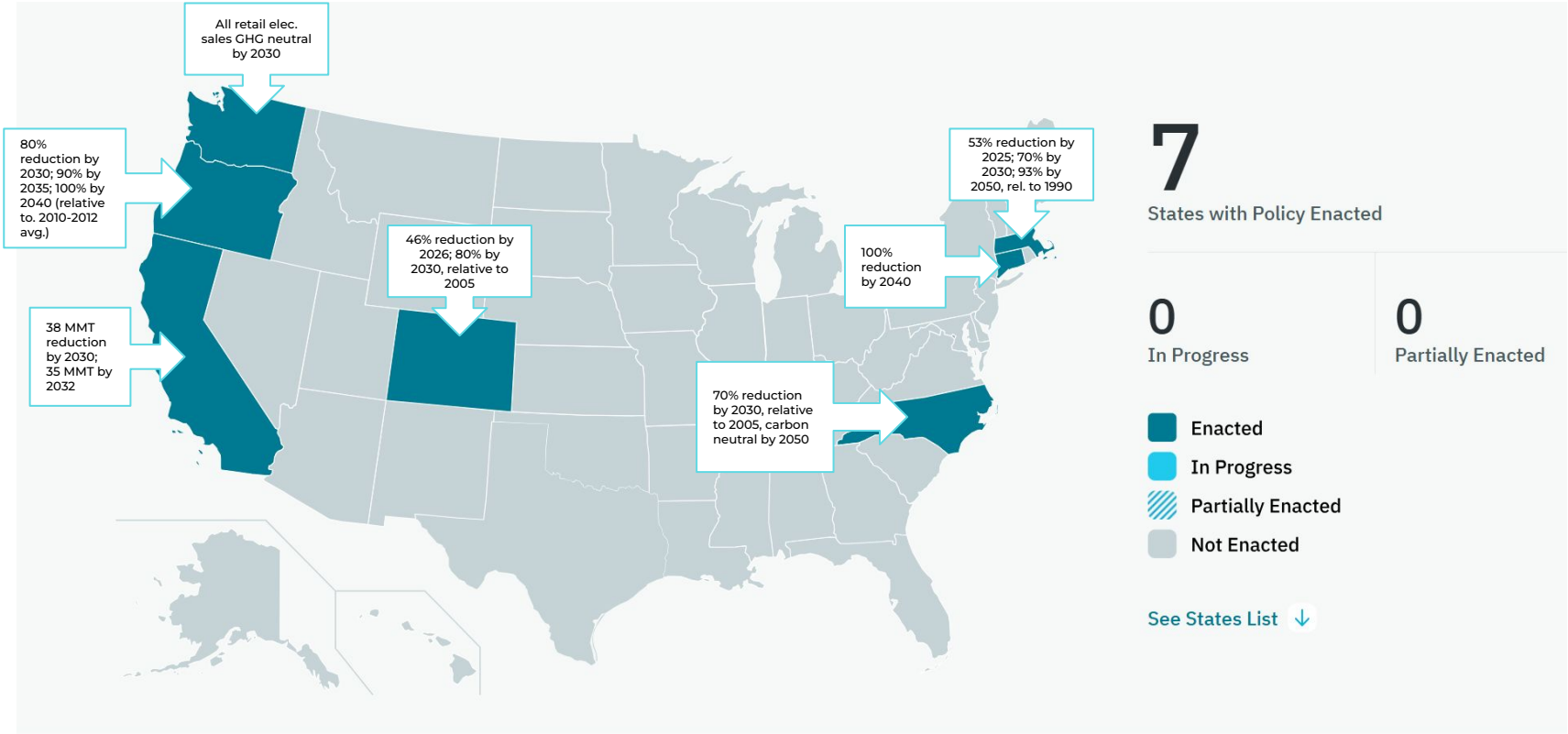
States are color-coded based on 2050 power sector emissions saved over business-as-usual scenario in EPA's power sector modeling.

- By 2050, many states see low or even negative emissions reductions, according to regulatory impact analysis.
- A handful of states drive most of emissions reductions, particularly where long-lived coal persists.

What States Can Do: **Regulate Plant Emissions Directly**

- State Implementation Plans can propose more stringent requirements than EPA regulations require.
    - CAA § 116: "[n]othing in this chapter shall preclude … any State to adopt or enforce any standard or limitation respecting emissions of air pollutants[.]"
    - SCOTUS in *Union Electric Company v. EPA*: "States may submit implementation plans more stringent than federal law requires[.]"
- Adopt standalone regulations.
    - Massachusetts, e.g., has enforced a state mercury regulation on power plant emissions since 2004.

Electricity Sector GHG Emission Reduction Targets



States with Electricity GHG Reduction Targets

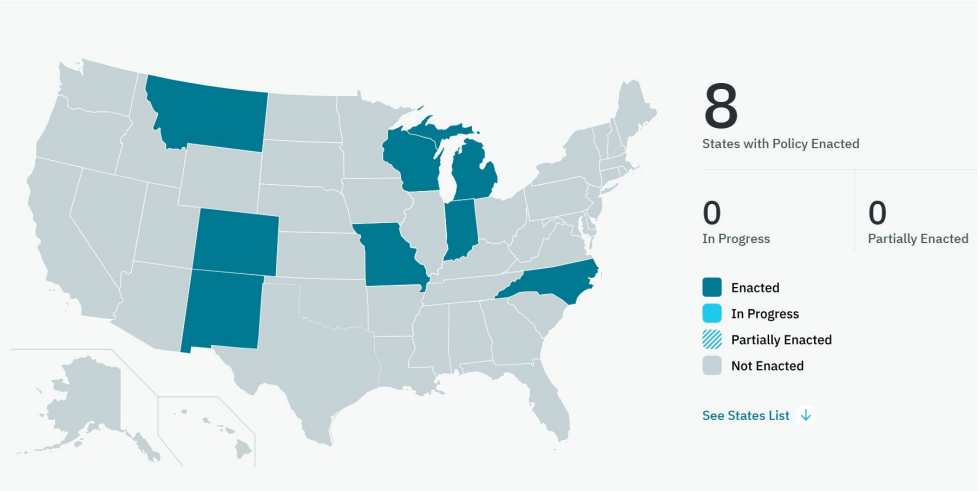
Coal Phaseout and Peaker Plant Regulations

Coal Phaseout

- **Stick Method:** Washington's Clean Energy Transformation Act (SB 5116, 2019), requires coal phaseout by 2026
    - LPDD's Model Law: best practice statute based SB 5116
- **Carrot Method:** Coal plant securitization, reinvest savings in programming that aligns with state priorities

Peaker Plant Regulations

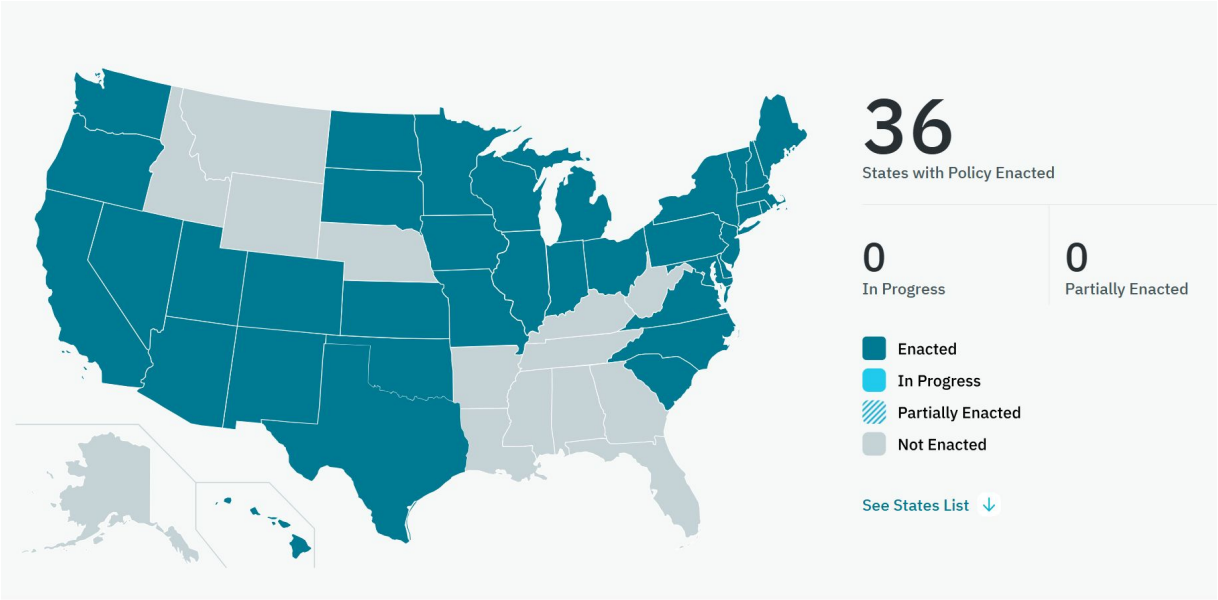
- Massachusetts' Clean Peak Standard (HB 4857, 2018): Target the **highest-emitting plants** in the sector; directs retail electricity suppliers/distributors to meet a minimum percent of sales with qualified peak resources



States with Coal Securitization Policies

Renewable Portfolio/Clean Energy Standards

To date, 36 states have established with **varying degrees of stringency**.



States with RPS/CESs

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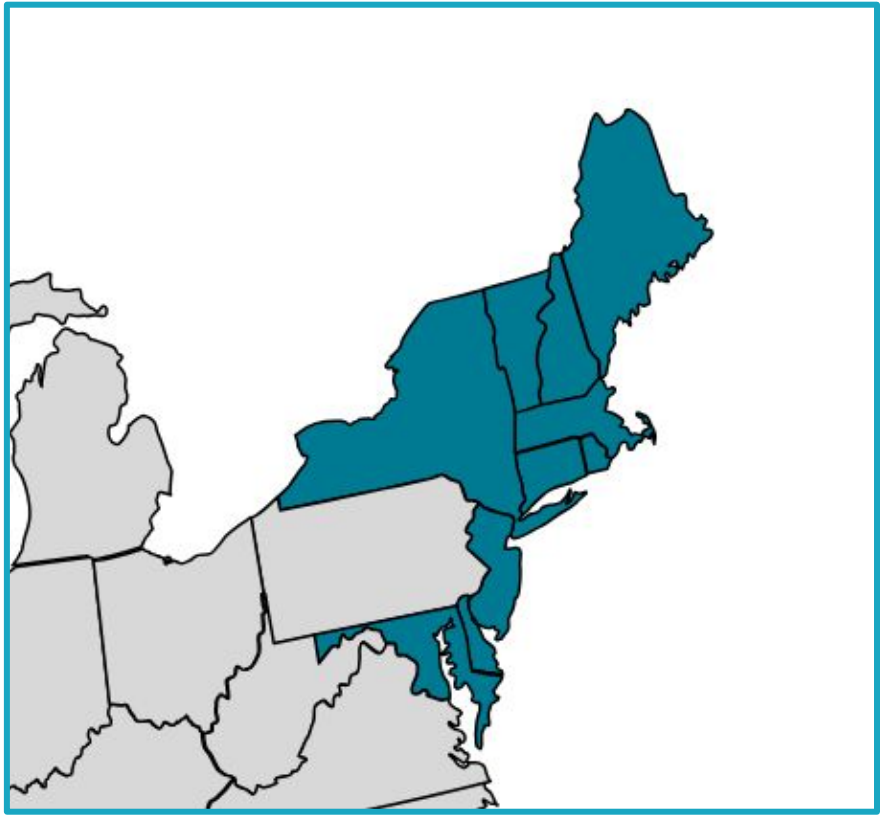
The Regional Greenhouse Gas Initiative (RGGI)

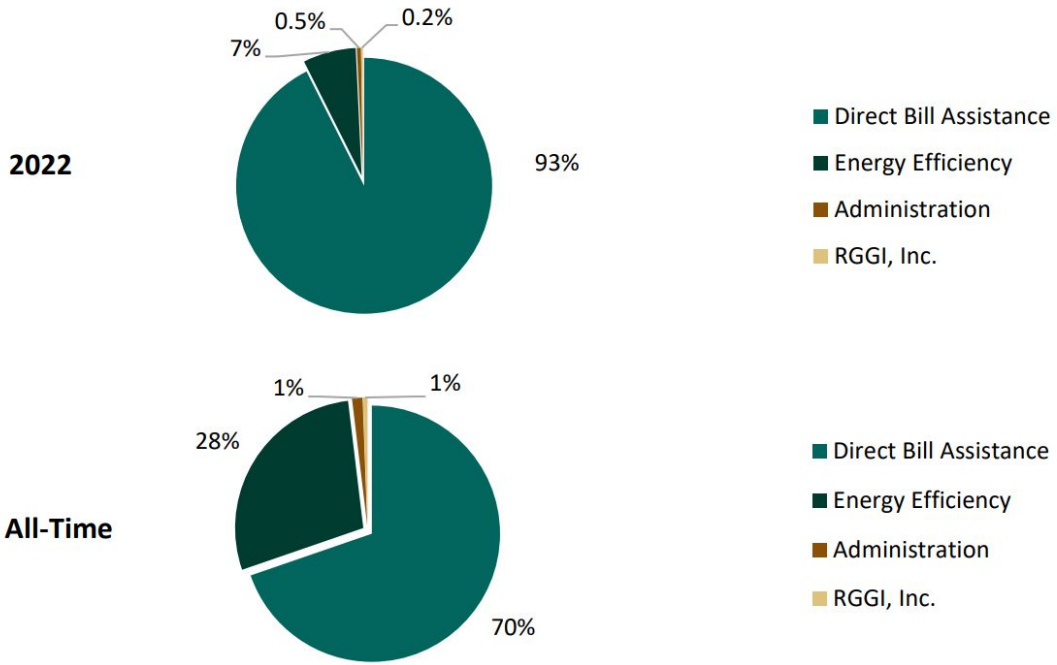
- Multi-state collaborative of **11 northeastern states** to reduce CO_2 emissions from power plants
- Since 2005, RGGI states have reduced annual power sector emissions by 50% (faster than national average) and have raised over **$8.6 billion to invest in local communities**
- States have discretion to use RGGI proceeds for programming that **aligns with political priorities**



11 States in the Regional Greenhouse Gas Initiative (RGGI)

RGGI Investments in New Hampshire

Chart 18: New Hampshire RGGI Investments by Category

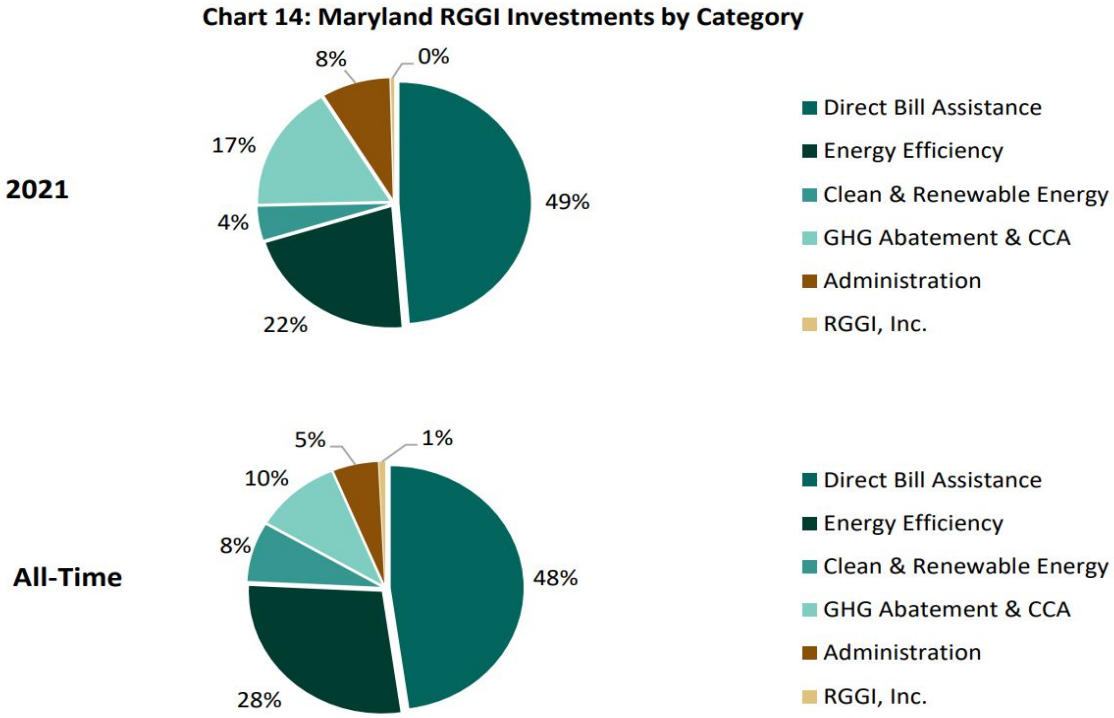


New Hampshire received $252M in proceeds from 2008-2022. RGGI investments represent $43M in 2022, and $252M cumulatively.

Source: [The Investments of RGGI Proceeds in 2022]

- **Direct Bill Assistance** included rebates to all electric customers
- **Efficiency Programs:** efficiency measures installed in 97 municipal buildings; weatherization self-install kits to 236 income-eligible homes; and moderate-income outreach programs

RGGI Investments in Maryland



Maryland received $815M in proceeds from 2008-2021. RGGI investments represent $40M in 2021, and $751M cumulatively. $63M is committed to 2022 and future investments.

Source: [The Investments of RGGI Proceeds in 2022]

- **Direct Bill Assistance** included low income bill payment
- **Efficiency Programs:** weatherization, installation of LED light bulbs and low flow showerheads, HVAC replacement (with higher efficiency models and heat pumps), and high efficiency gas water heaters and hot water pipe installation

Tailpipe Regulations and CAFE Standards: Background

- 3 Rules for Vehicle Emissions Standards:
  - **Heavy Duty Truck NOx Rule** (no reliance on endangerment finding)
  - **Multi-Pollutant Rule** (partial reliance on endangerment finding): In 2024, EPA finalized technology-neutral, performance-based standards for model years 2027-2032. Rules had been projected to save 7.2 billion metric tons of CO_2 over the life of the program.
  - **GHGs for HDVs Phase 3** (reliant on endangerment finding) extending beyond 2031
- **2022 CAFE standards** had raised efficiency for passenger cars and light trucks, reaching an average fuel economy of 50.4 mi/gal by 2031.
  - U.S. Dept. of Transportation directed CAFE review in January.

California Vehicle Waivers: Background

- CA's rules for Light and Heavy Duty Cars and Trucks can be adopted under Sec. 177 by any state.
    - **17 states** (approximately 35% of the auto market) have adopted some part of CA's regs.
- Congressional Review Act
    - Trump Administration submitted CA rules on Omnibus Low NOx, Advanced Clean Cars II, and Advanced Clean Trucks to Congress under Congressional Review Act.
    - 60-day legislative clock triggered on February 19.
    - Gov. Accountability Office released March decision that CA waivers are NOT rules for purposes of CRA.
    - Senate Parliamentarian confirms GAO interpretation on April 4. Since parliamentarian is advisory, Senate may overrule.
- If CRA path is blocked, EPA may try to rescind waivers directly (which took over a year to finalize last time)
    - CA made arguments that waivers cannot be revoked in first term. Efforts to revoke, based partially on preemption by a 1975 law, were not legally resolved last time before Biden took office.

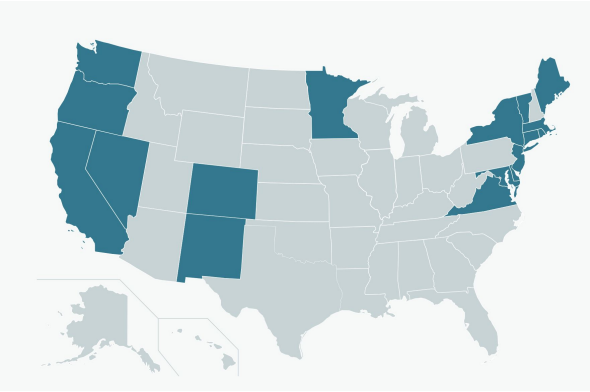
Preemption of Tailpipe Emissions

- The CAA distinguishes between *stationary* and *mobile* sources of pollution, preempting state governments from adopting their own air pollutant emissions standards for new motor vehicles and new motor vehicle engines.
- Even setting aside waivers, states can still regulate fuels, the charging network, charging rates, taxes and rebates, procurement, building and zoning codes, and much more.

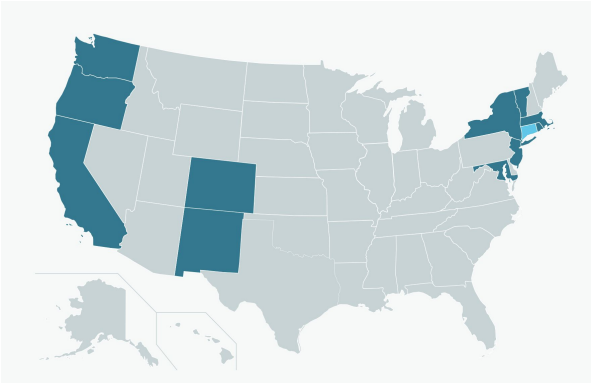
What States Can Do: **Adopt California's Vehicle Rules**

While they stand, adopt California's vehicle rules to regulate tailpipe emissions and require increased EV sales over time

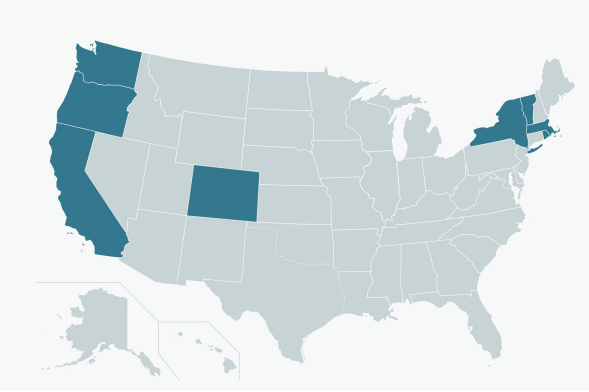
- **Advanced Clean Cars II (ACC II)**: Sets exhaust limits and requires an increasing percentage of new LDV sales to be zero-emission for MY 2026-2035, reaching 100% of new sales by 2035
- **Advanced Clean Trucks (ACT)**: Sets zero-emission sales standard for medium- and heavy-duty vehicles for MY 2024-2035, reaching 40-75% of sales depending on vehicle class
- **Low-NOx Omnibus Rules**: Limits NOx emissions from heavy-duty vehicles for MY 2024-2031



17 states have adopted ACC I or II



11 states have adopted ACT



8 states have adopted Low-NOx rules

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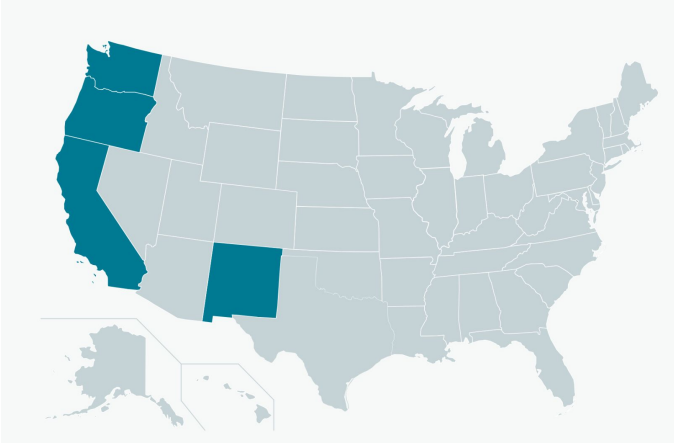
What States Can Do: **Low Carbon Fuel Standards**

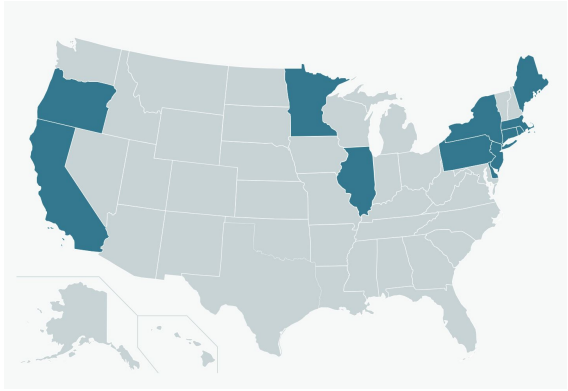
- Reduces the carbon intensity (CI) of transportation fuels, accounting for the life cycle emissions associated with the production, distribution, and consumption of transportation fuels.
    - Sets CI targets that decline over time
- Creates a market to buy, sell, and trade credits based on whether fuels are above or below a state's CI targets
- In practice has led to use of biofuels over electricity (CA)



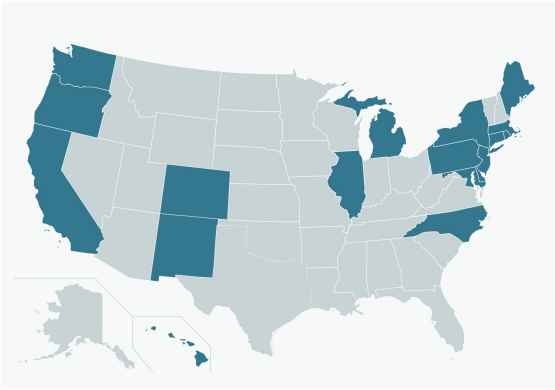
4 states have adopted a LCFS

What States Can Do: **Encourage EV Adoption and Build Out Charging Networks**

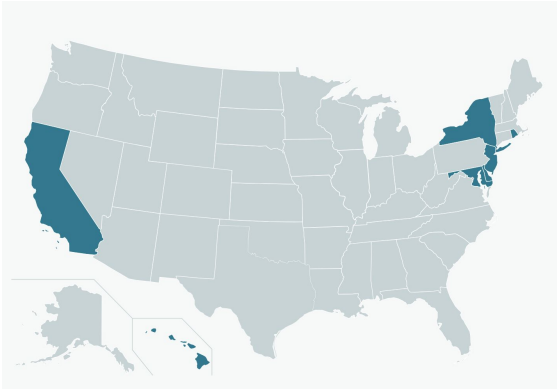
- Tax incentives and rebates for EVs and chargers
  - Tax credits, rebates, tax exemptions, toll discounts, etc. for EVs
- Government procurement/Lead by Example
  - Ex: CT prioritizes school bus electrification in EJ communities



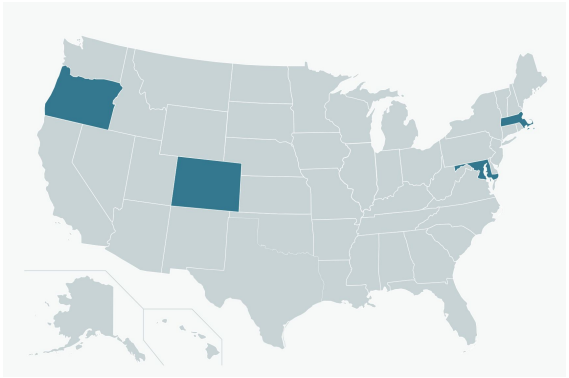
12 states offer LDV EV rebates



18 states have LDV/MHDV EV procurement targets and/or electric bus targets



7 states offer EVSE rebates



4 states offer MHD EV rebates

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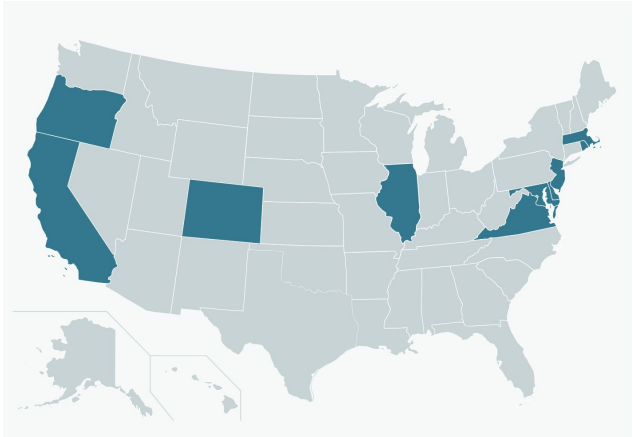
What States Can Do: **Encourage EV Adoption and Build Out Charging Networks**

- Streamlined permitting for EV charging stations
  - Ex: California AB 1236 (2015) and AB 970 (2021) require cities and counties to adopt streamlined permitting procedures for EV charging stations, and establish a checklist that municipal permitting schemes should abide by
- EV-related building and zoning codes
  - EV-Ready Codes for New Buildings, Curbside Charging permissions
- Administrative/planning steps
  - EV charging rate design
  - PUC proceedings to build out charging infrastructure
  - State or multi-state EV planning exercises



10 states have EV charging infrastructure requirements

HFCs: What Are They, Exactly?

Creative Commons

Highly potent, short-lived family of GHGs

- **Short lived**: Most commonly-used HFCs have an average life less than 15 years.
- **Potent**: With global warming potentials (GWP) from 460 to 9,100 times that of CO2, depending on the gas.
- HFC leaks from **supermarket refrigeration** is a leading source.
- Total phaseout of HFCs globally could prevent **0.5 degrees C of warming** by 2100.

AIM Act and HFCs: Background

In 2020, Congress passed the American Innovation in Manufacturing (AIM) Act, authorizing EPA to:

- Phase down the production and consumption of listed HFCs
- Manage these HFCs and their substitutes, and
- Facilitate the transition to next-generation technologies through sector-based restrictions.

In response to this legislation, EPA's Technology Transition rule mandates a phased reduction in the use of hydrofluorocarbons (HFCs) with high global warming potential (GWP) in new refrigeration, air conditioning, and heat pump equipment.

What Does the AIM Act Actually Require?

The AIM Act leaves less discretion to EPA, as it prescribes a specific HFC phasedown schedule:

> *the Administrator **shall** … issue a final rule:*
>
> *(A) phasing down the production of regulated substances in the United States through an allowance allocation and trading program in accordance with this section; and*
>
> *(B) phasing down the consumption of regulated substances in the United States through an allowance allocation and trading program in accordance with the schedule [below]:*

Date	Percentage of Production Baseline	Percentage of Consumption Baseline
2020–2023	90 percent	90 percent
2024–2028	60 percent	60 percent
2029–2033	30 percent	30 percent
2034–2035	20 percent	20 percent
2036 and thereafter	15 percent	15 percent

Regulated Substances, Schedules, Exchange Values, Oh My!

EPA might have **a lot to revisit** from translating this long list of regulated substances, with different exchange values, into technologically feasible schedules in line with the AIM targets.

Chemical Name	Common Name	Exchange Value
CHF_2CHF_2	HFC–134	1100
CH_2FCF_3	HFC–134a	1430
CH_2FCHF_2	HFC–143	353
$CHF_2CH_2CF_3$	HFC–245fa	1030
$CF_3CH_2CF_2CH_3$	HFC–365mfc	794
CF_3CHFCF_3	HFC–227ea	3220
$CH_2FCF_2CF_3$	HFC–236cb	1340
CHF_2CHFCF_3	HFC–236ea	1370
$CF_3CH_2CF_3$	HFC–236fa	9810
$CH_2FCF_2CHF_2$	HFC–245ca	693
$CF_3CHFCHFCF_2CF_3$	HFC–43–10mee	1640
CH_2F_2	HFC–32	675
CHF_2CF_3	HFC–125	3500
CH_3CF_3	HFC–143a	4470
CH_3F	HFC–41	92
CH_2FCH_2F	HFC–152	53
CH_3CHF_2	HFC–152a	124
CHF_3	HFC–23	14800.

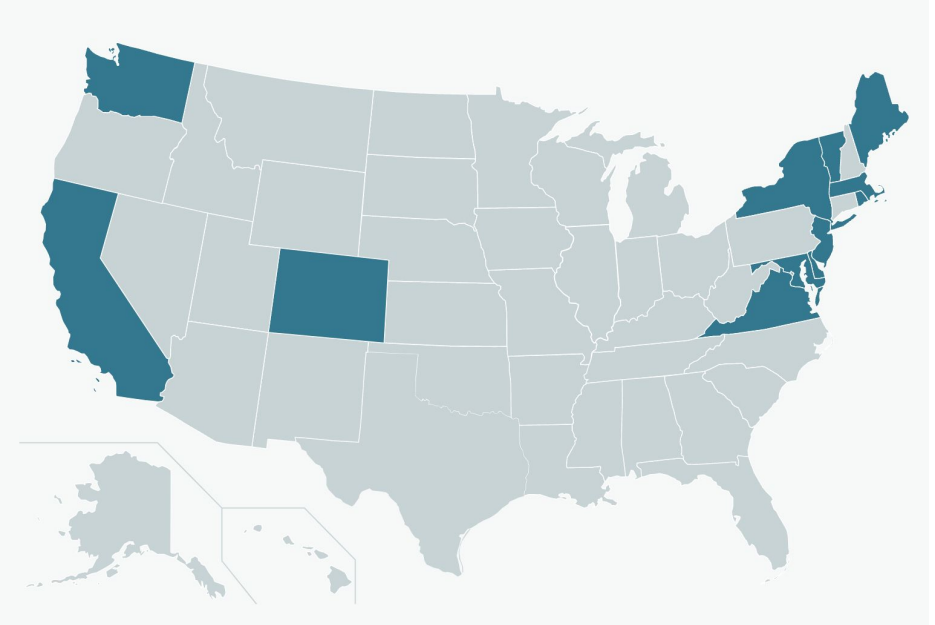
Significant New Alternatives Policy (SNAP) Program

- Established under the Clean Air Act
- Evaluates substitutes for ozone-depleting substances (CFCs) and HFCs
- SNAP Rules 20/21 restrict HFCs based on end use and propose alternatives

End-Use	Prohibited Substance	Effective Date
Aerosol	HFC-125	Unacceptable as of January 1, 2019.
Aerosol	HFC-134a	Unacceptable as of January 1, 2019 except for uses listed as acceptable, subject to use conditions.
Aerosol	HFC-227ea and blends of HFC-227ea and HFC-134a	Unacceptable as of January 1, 2019 except for uses listed as acceptable, subject to use conditions.

What Can States Do: **Phase Down HFC Use**

- States can use SNAP Rules 20 and 21 as guidelines or exceed EPA's regulations
- Set phasedown dates based on end-use of specific substances
  - Tailored to each industry's needs and availability of alternatives
- CA was first state to adopt SNAP Rules and also has HFC phasedown target of 40% by 2030



States with HFC Regulations

What Can States Do: **Incentivize Alternatives to HFCs**

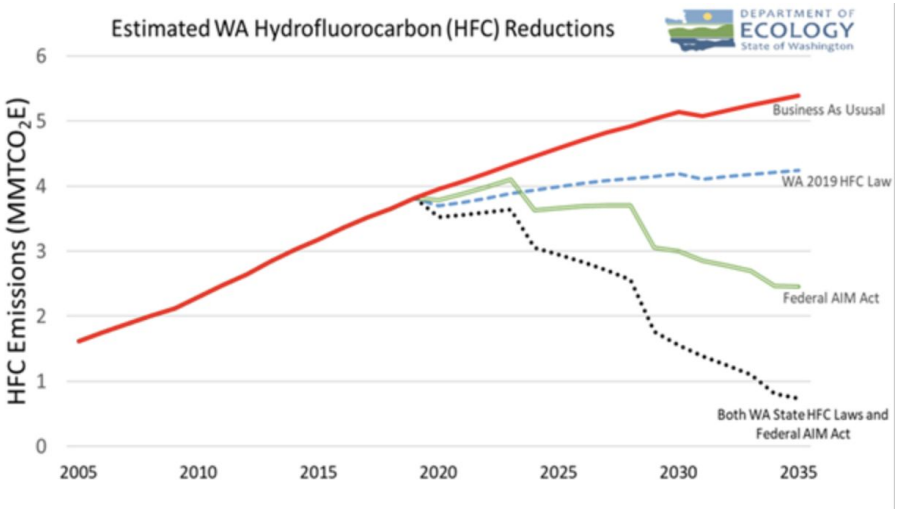
- Rebates for low global warming potential equipment
  - State or utility rebate programs for energy-efficiency projects

- Funding for pilot projects and programs
  - Ex. California F-Gas Reduction Incentive Program Round 2 has $65 million in funding
    i. Application window is open through August 29, 2025

What Can States Do: **Adopt Procurement Preferences for HFC-Free Products**

- State agencies are **restricted from purchasing HFC products** unless alternatives are not cost effective or available

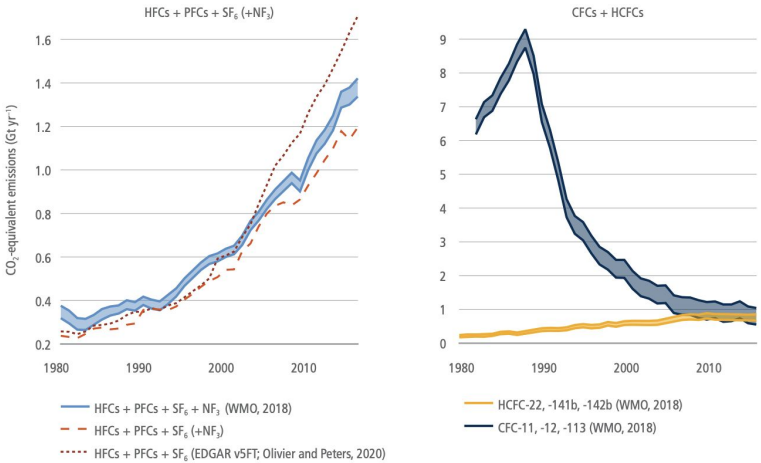
- Ex. Washington HB 1112 (2019)
  - Agencies/government entities must submit HFC preference language in solicitation requests from vendors



Source: [State of Washington Department of Ecology]

What Can States Do: **Regulate Management, Recycling, and Disposal of HFC Equipment**

- Most HFC emissions come from equipment leaks and improper disposal at equipment's end of life
- States can create training programs, establish maximum leak rates, require leak detection systems, and prioritize recycling of unused HFC gas



Source: [Intergovernmental Panel on Climate Change]

Oil and Gas Sector Methane Regulations

EPA will reconsider methane and volatile organic compound regulations in oil and gas operations. The 2024 rules include:

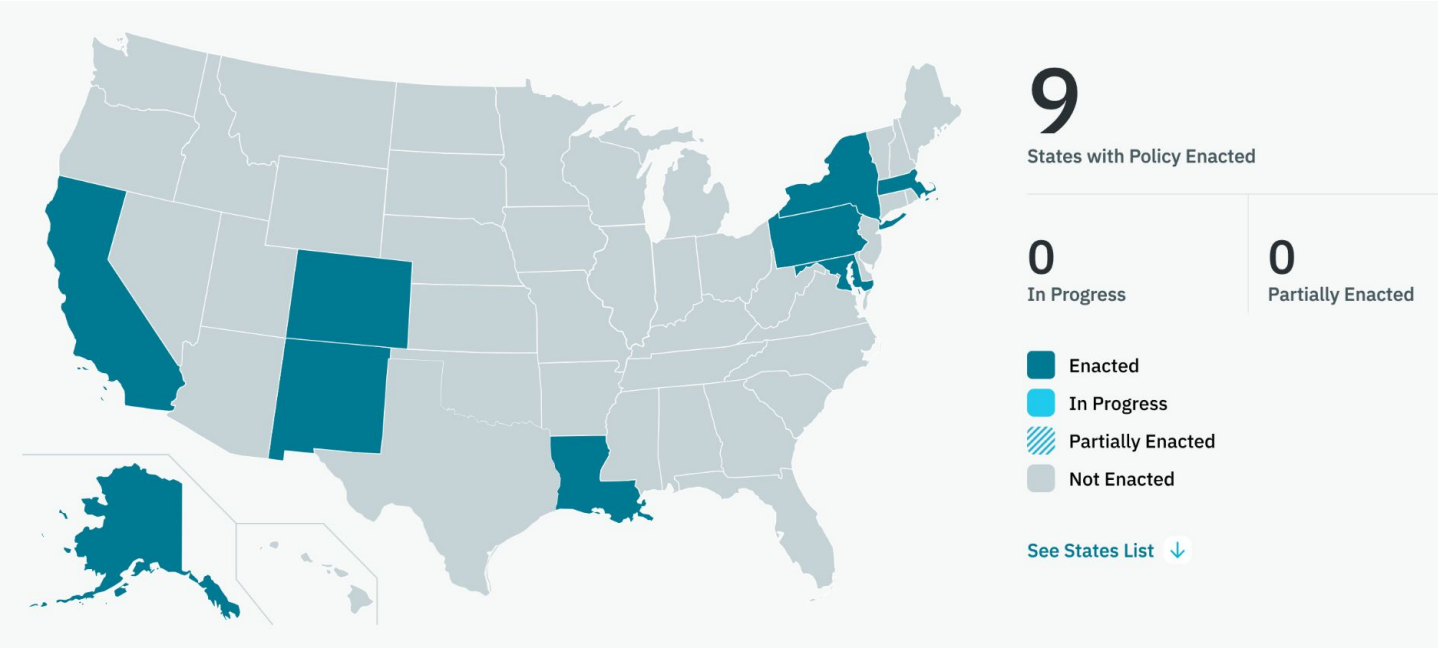
- Leak monitoring for well sites, production facilities, compressor stations
- Zero-emissions standard for new process controllers (which can be electric, or compressed air-fueled)
- Eliminates routine flaring of methane from new oil wells
- Sets emissions standards for dry seal compressors, which were not previously regulated
- Offers options for using advanced methane detection technologies to find leaks

Impacts of Oil and Gas Methane Emissions

- Oil and gas is the largest industrial source of methane.
- Methane is responsible for around 30 percent of warming to date.
- Oil and gas is responsible for an estimated 30 percent of U.S. methane emissions.
- Rules projected to save 1,500 MMT CO2-e from 2024 to 2038 – ramping up to 130 MMT / year CO2-e indefinitely, following a phase-in schedule. By comparison:
  - 130 MMT CO2-e represents 17% of total 2022 US methane emissions (760 MMT CO2-e)
  - 130 MMT CO2-e represents 2% of total 2022 US GHG emissions (6343 MMT CO2-e)
  - Peak annual emissions savings from power plant GHG limits are 124 MMT CO2, declining to 40 MMT CO2 by 2045.

State Strategies for Methane Regulations

9 states have their own **methane regulations for oil and gas production and operation**



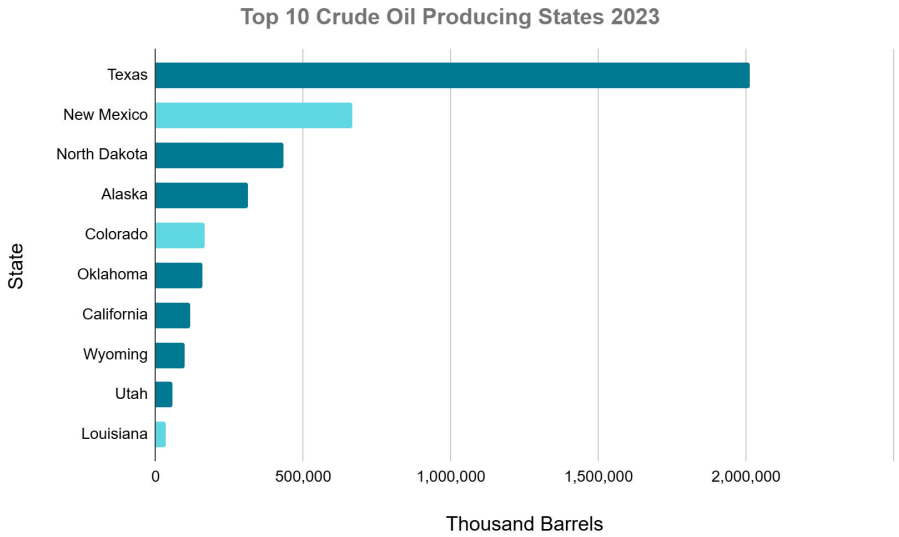
States with O&G Methane Regulations

State Climate POLICY DASHBOARD | Powered by Climate XChange

Colorado

***Most comprehensive** oil and gas methane regulations in the US:*

- HB 21-1266: Reduce methane from oil and gas operations **60% below 2005 levels by 2030**
- Oil and gas companies must **find and fix methane leaks** and install technology to limit emissions.
- **Leak detection and repair** and **prohibition of routine flaring** during maintenance.
- Operators are required to **report their emissions** under the Colorado GHG Reporting Rule.
- Established the first **midstream** oil and gas regulation in the U.S. last year

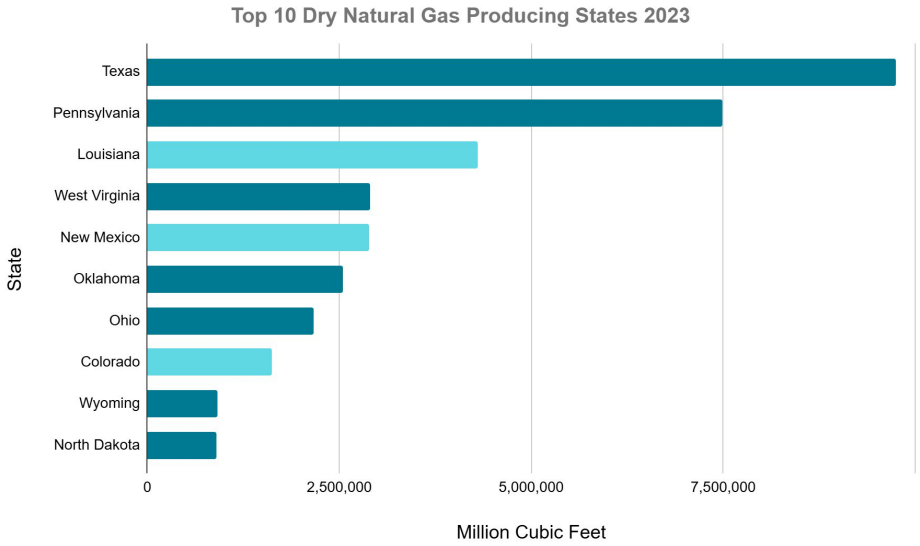


Data Source: EIA

Louisiana

A state with heavy industrial emissions targeting methane:

- **Prohibits routine venting and flaring** of natural gas except in instances of **economic hardship** on the operator
    - Guardrail: if an operator is still turning a profit based on the price of natural gas, they cannot claim economic hardship.
- Authority to regulate is granted through two sections of the **Louisiana Administrative Code**
- Regulation effective as of May 7, 2024



Data Source: EIA

New Mexico

- Operators are required to **capture 98% of their waste natural gas by the end of 2026** and are required to calculate emission rates, perform monthly checks for leaks and fix them within 15 days, and achieve state-determined emission reduction requirement for certain equipment and processes
- **Limited tax revenue** for government activities and **high state revenue from oil and gas industry**.
    - Some criticisms of the regulation are:
        - Operators are required to self-report venting and flaring
        - Limited field enforcement
        - Regulations are not codified into law
            - **HB 258** was proposed this session, but did not make it out of committee.
- New Mexico still serves as an example of a pro-oil and gas state that is taking steps to reduce emissions from the sector, given a more complicated economic climate.

Q&A

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Thank you for joining!

Reach out to kristen@climate-xchange.org with any additional questions!

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