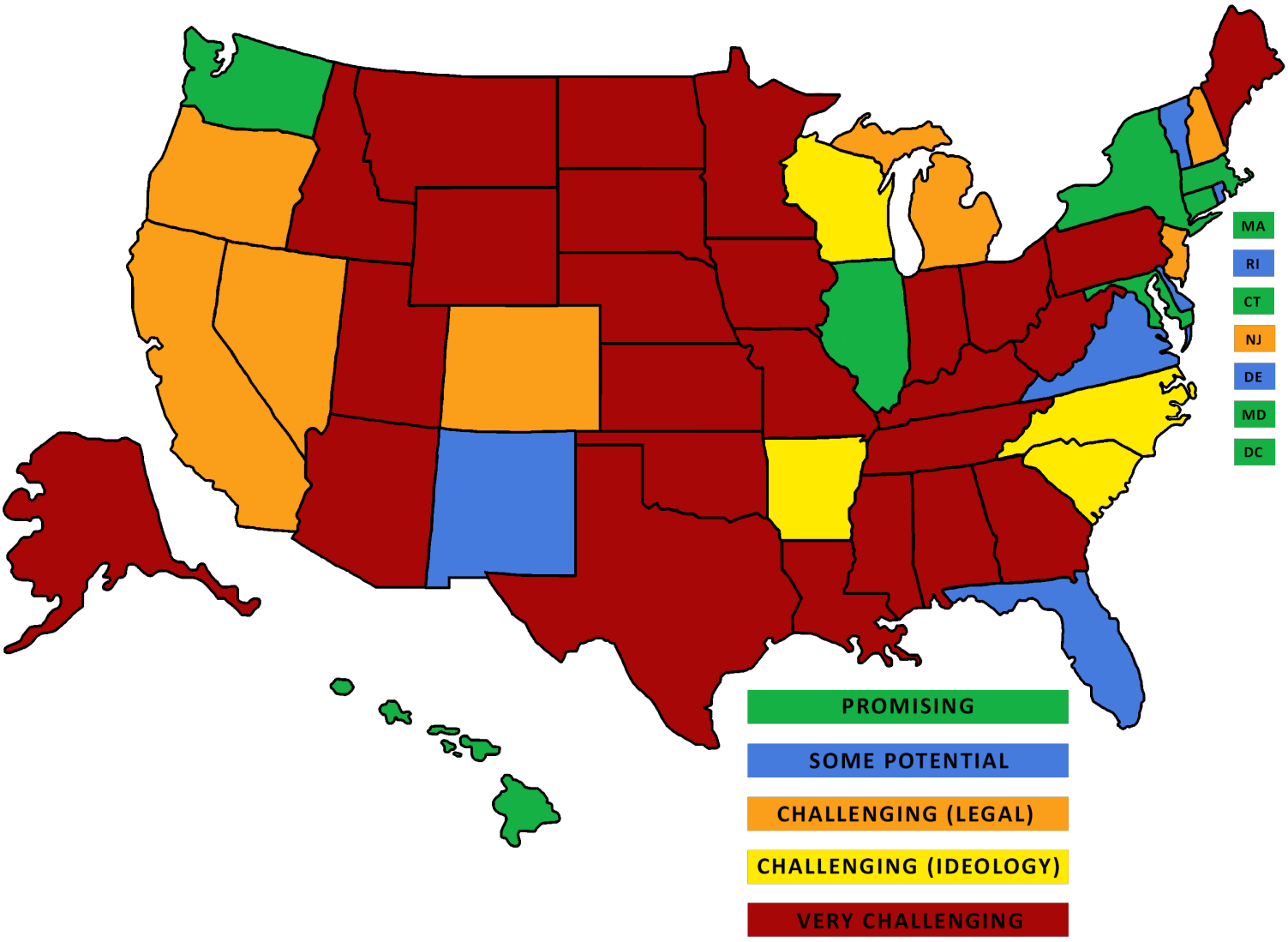
Opportunities for Carbon Taxes at the State Level

By Yoram Bauman and Charles Komanoff

A Carbon Tax Center report

April, 2017



This report was written by **Yoram Bauman, Ph.D.** and **Charles Komanoff.**

Bauman received his Ph.D. in economics from the University of Washington in 2003, with a focus on environmental economics and public finance. He was the co-author (with Alan Durning) of *Tax Shift*, a 1998 book that helped inspire the revenue-neutral carbon tax in British Columbia, and was the founder and co-chair of Carbon Washington, the grassroots organization that put a revenue-neutral carbon tax on the November 2016 ballot in Washington State. Initiative 732 did not pass, and Bauman has since moved to Salt Lake City, but he continues to advocate for carbon pricing in the "stand-up economist" talks he gives at colleges and corporate events around the country. In that guise he is also the co-author (with Grady Klein) of the *Cartoon Introduction to Economics*, the *Cartoon Introduction to Climate Change*, and the forthcoming *Cartoon Introduction to Calculus*.

Komanoff co-founded the Carbon Tax Center in 2007 and has served as CTC's executive director since 2010. His career encompasses economic analysis, journalism, organizing, direct action and mathematical modeling on climate, energy and urban transportation. Komanoff's early work included documenting environmental pollution from U.S. coal-fired power plants and quantifying cost escalation in the U.S. nuclear power industry. He later rejuvenated urban "livable streets" activism as president of the NYC bicycle advocacy organization Transportation Alternatives and as co-founder of the safer-streets group Right of Way. Komanoff has written or co-authored four books, including *The Price of Power: Electric Utilities and the Environment*, *Power Plant Cost Escalation*, and *The Bicycle Blueprint* (all available at www.komanoff.net).

Since 2007, the **Carbon Tax Center** has been educating and mobilizing advocates, public officials and other concerned citizens to enact robust and equitable carbon pollution taxes in the United States. Through our web site, blog posts, papers, economic modeling and networking, CTC informs and tutors citizens and officeholders to help them advocate for carbon taxes at all levels of government.

Acknowledgments: This report was made possible by a generous grant to the Carbon Tax Center from the Laura and John Arnold Foundation. The authors also thank staff of Citizens' Climate Lobby for valuable feedback, and Mark Bohnhorst for his assistance on state constitutional law. Michael Kendall artfully and meticulously handled production and design. State maps are by Lindsea Bevington.

* * * * *

The URL/permalink for this report is https://carbontax.org/Opportunities_for_Carbon_Taxes_at_the_State_Level.pdf.

Check for updates to this report at https://www.carbontax.org/states/.

Table of Contents

(Clicking below will direct you to the specified page.)

Preface: Carbon Taxes Matter More Than Ever

Decarbonization of the world's energy is under way. U.S. carbon emissions are trending lower, China's have flatlined for three years running, and Great Britain's have fallen to levels not seen since the late 19th Century. The solar and wind revolution is accelerating, and energy efficiency, long ignored, is increasingly a profit center for business and industry.

This ought to be heartening. But at best it's a bare minimum. To adhere to the commitment in the 2015 Paris Agreement to limit the global temperature rise from pre-industrial levels to 1.5°C, anthropogenic emissions must peak within the next ten years and then fall sharply.

Meeting this goal, or any other goal that seriously addresses the risks of climate change, requires a worldwide transformation in energy — one that not only multiplies the efficiencies of cars and appliances and buildings but changes the ways in which vehicles and devices are used. It means quickly scaling up the best renewable and efficient technologies, and creating new ones. And it entails rewiring social norms to favor light footprints over heavy ones.

We believe that robust carbon taxes are essential for effecting this transformation. Like it or not, the prices of fuels and energy are a dominant factor in how we choose and use them — and, thus, in how much carbon pollution we generate.

The artificial marketplace advantage of unpriced pollution has helped lodge fossil fuels deeply into our economic system and social structures. Until we begin to charge fossil fuels for their climate damages, we won't drive out fossil fuels and drive down carbon emissions at nearly the requisite pace.

The magnitude and urgency of this task also highlight the advantages that carbon *taxes or fees* have over cap-and-trade systems as a way to put a price on carbon. Carbon taxes are straightforward, they easily penetrate entire economies, and they can be implemented quickly. They also lend themselves to being fair and transparent, attributes that are important to advocates for change.

Carbon taxes are much discussed but have little presence in actual policy. No more than 5 percent of the world's fossil fuel use is carbon-taxed, and much of that is at modest levels. None of the world's five top emitters — China, United States, Russia, India, Japan — has a carbon tax covering even a province or state. In the U.S. the national levers of power are controlled by a political party that does not even acknowledge anthropogenic climate change.

This must and will change. The catalysts could be many: political upheaval in Congress, a climate disaster in America, a grassroots tide that becomes irresistible, demands from big business, international pressure. In time, centrist Democrats who have shied from carbon taxes, and Republicans who ignore or belittle climate concerns altogether, will either come around or be booted from office.

Establishing carbon taxes in one or more states can help prepare the country for that moment, as well as hasten its arrival. For proof, look no further than Canada, where the example of British Columbia's popular and effective carbon tax led Prime Minister Justin Trudeau last fall to commit to establishing a

national carbon emissions price beginning next year at $10 (Canadian) per metric ton and rising incrementally to reach $50 in 2022.

It's not hard to imagine a parallel path in the United States. The states have long functioned as laboratories of innovation, in Justice Brandeis's famous phrase. States introduced gasoline taxes to pay for roads early in the last century and could establish carbon taxes in this one. States that are less under the sway of fossil fuel interests may face less carbon tax opposition at the legislature or ballot box. The state level may also be better suited for distributing carbon revenues in ways that help families and businesses adjust to the carbon tax.

Campaigns for state carbon taxes educate the public and advance the idea on the policy map. Enacting an actual state carbon tax will do more than "move the needle"; it will create facts on the ground that can transform the climate debate.

"Only a crisis — actual or perceived — produces real change," wrote the iconic 20th Century American economist and Nobel laureate Milton Freidman. "When that crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes the politically inevitable."

Our mission as carbon tax advocates is similar, but with a twist: to take the carbon tax alternative and educate and organize the public and policymakers so that it becomes a reality. We hope this report helps.

— Yoram Bauman, Charles Komanoff

Executive Summary

This report presents a state-by-state analysis of the potential for enacting carbon taxes in each of the 50 states plus the District of Columbia.

A small number of states appear to offer opportunities to enact state-level carbon taxes. However, most states present tough challenges. These include:

(1) concerns over carbon "leakage" and competition, which are especially pronounced in states with high emissions in the industrial and/or electricity sectors;

(2) voter skepticism about climate change and antipathy to carbon taxes, as reflected in polling; this led to lower rankings for five New England states — Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine — that are otherwise fairly supportive of climate action; and

(3) the presence in about half of all states of constitutional restrictions that appear to bind revenues from taxes on motor fuels to highways. These restrictions pose a serious challenge because expenditures on highways threaten to upset the environmental and political case for carbon taxes and because of potential interactions with other constitutional limits (such as "single-subject" rules for legislation).

The state-by-state list directly below categorizes states based on these challenges as well as potential opportunities, such as each state's vulnerability to climate impacts, the extent to which that vulnerability appears to have been internalized by voters, and the emergence of renewable energy as a palpable alternative to fossil fuels. While further research might identify additional state-specific factors, most of these are likely to be hurdles that would make states *less* rather than *more* likely to adopt carbon taxes.

This report identifies:

- **Eight jurisdictions that are promising for carbon taxes: Connecticut, DC, Hawaii, Illinois, Maryland, Massachusetts, New York and Washington.** Of these, only DC, Massachusetts and Washington have ballot measure options; those three locations also have the most active campaigns. Existing laws already price electricity-sector emissions in Connecticut, Maryland, Massachusetts and New York via RGGI, the Regional Greenhouse Gas Initiative.
- **Six states that have some potential: Delaware, Florida, New Mexico, Rhode Island, Vermont and Virginia.** Of these, only Florida has a ballot measure option. Rhode Island and Vermont have the most active campaigns for legislation to price carbon emissions, and existing laws already price some emissions in Delaware, Rhode Island and Vermont (via RGGI).
- **Seven states that are challenging for legal reasons, but would otherwise be promising or potential: California, Colorado, Michigan, Nevada, New Hampshire, New Jersey and Oregon.** The state constitutions in these jurisdictions appear to require revenues from taxes on sales of gasoline and diesel fuel to be spent for highway purposes (or public transportation, in the case of California). In California and other states there may also be constitutional mandates regarding education spending. If these legal concerns could be surmounted, four of these states would be promising (California, Nevada, New Jersey and Oregon) and three would have some potential

(Colorado, Michigan and New Hampshire). Existing laws already price some emissions in New Hampshire (via RGGI).

- **Four states that are challenging for ideological reasons only: Arkansas, North Carolina, South Carolina and Wisconsin.** If these ideological obstacles were overcome then two of these states would be promising (North Carolina and South Carolina) and two would have some potential (Arkansas and Wisconsin).

Summary: 25 states that are promising or may have potential for carbon taxes

	Promising	Potential
No legal or ideological constraints	CT, DC, HI, IL, MD, MA, NY, WA	DE, FL, NM, RI, VT, VA
Promising/potential but with legal constraints	CA, NV, NJ, OR	CO, MI, NH
Promising/potential but with ideological constraints	NC, SC	AR, WI

The remaining twenty-six states are **very challenging for multiple reasons** having to do with legal issues, ideology, and/or economic considerations:

- **Six states face legal and ideological (but not economic) challenges:** Arizona, Georgia, Idaho, Maine, Missouri and Utah.
- **Two states face legal and economic (but not ideological) challenges:** Minnesota and Pennsylvania.
- **Five states face ideological and economic (but not legal) challenges:** Alaska, Louisiana, Nebraska, Oklahoma and Tennessee.
- **Thirteen states face all three challenges (legal, ideological, and economic):** Alabama, Indiana, Iowa, Kansas, Kentucky, Mississippi, Montana, North Dakota, Ohio, South Dakota, Texas, West Virginia and Wyoming.

Following the Notes directly below, the remainder of this report presents our state-by-state analysis, beginning with the eight “Promising” jurisdictions and concluding with the twenty-six “Very Challenging” ones.

Notes

(1) Per-capita sectoral emissions in various states are characterized as "high" relative to the U.S. average if they are at least 1.25x the U.S. average, and "very high" (or "extremely high") if they are at least 2x (or 3x) the U.S. average; similarly, "low", "very low" or "extremely low" are used for per-capita emissions that are no more than 0.8x, 0.5x or 0.33x the U.S. average.

(2) Per capita small-scale solar data for 2016 comes from EIA Electric Power Monthly (Table 1.17.B) combined with population figures from the U.S. Census. Only the top 13 states are identified because of the significant jump between #13 (DC, with 79 kWh per capita in 2016) and #14 (Utah, with 49 kWh).

(3) The States at Risk report prepared by Climate Central in 2015 ranks all 50 states (but not DC) in five categories: extreme heat, drought, wildfire, inland flooding and coastal flooding.

(4) Ideologies for all jurisdictions except Washington DC are based on the analyses of Berry et al. (last updated 2015), which has a listing of citizen and legislative ideologies; and the American Legislatures project, which in July 2014 published results for 2013. In all cases the ten most liberal states were categorized as "very liberal", the next ten as "liberal", the next ten as "moderate", the next ten as "conservative" and the final ten as "very conservative". The "very liberal" ideology for Washington DC is a widely held belief. Control of state legislatures and governor's offices is for 2017 and comes from National Conference of State Legislatures.

(5) Yale Climate Opinion Maps data are from 2016 except for the carbon tax questions, which are from 2014. The 2014 survey asks about a carbon tax that is refunded to American households; the full question is "*Some people say that Congress should enact a "revenue neutral tax swap" that would reduce the annual taxes paid by all Americans, while increasing the amount they pay annually for energy (such as gasoline and electricity) by the same total amount. How likely would you be to support or oppose the proposal if the money raised from the carbon tax was used to give a tax refund to every American household?*" Because of the large percentage of undecided responses (31% for the U.S. as a whole, compared with 1% for a question about "regulating CO2 as a pollutant"), the listings below include both (a) the percentage of "support" responses (44% for the U.S. as a whole) and (b) the percentage of responses that were either "support" or "undecided" (75% for the U.S. as a whole), calculated by subtracting from 100 the percentage of "oppose" responses.

(6) Regarding state restrictions on motor fuel revenues, see also National Council of State Legislatures 2011.

(7) Many states carry a ranking attributed to "one climate-focused group." These data are confidential and can only be referred to in this way.

Promising States

Connecticut

DC

Hawaii

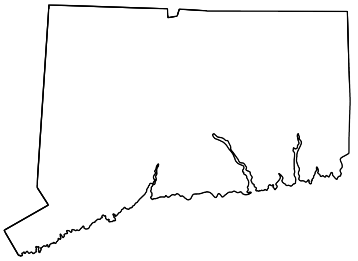
Illinois

Maryland

Massachusetts

New York

Washington



Connecticut

Promising

Summary: Connecticut is promising.

Industrial and electricity sector emissions are extremely low, and citizens and the legislature are liberal and supportive on climate issues. Also, Connecticut ranks #10 among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. The state has no ballot measure option. Note that Connecticut is a member of RGGI, the electricity sector cap-and-trade program that covers nine northeast states.

Emissions

Per-capita emissions in 2014 were 0.6x the U.S. average, with extremely low industrial sector emissions and extremely low electricity sector emissions (all the more impressive given that 5-15% of power generation is exported).

Tonnes CO2 (2014)	U.S. (per capita)	Connecticut (per capita)	Connecticut (% of total)
Total	17.0	9.8	100%
Commercial	0.7	1.0	11%
Electric Power	6.3	1.9	19%
Residential	1.1	2.1	21%
Industrial	3.0	0.6	6%
Transportation	5.8	4.2	43%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emission rate for electricity (531 lbs CO2/MWh) was 0.5x the U.S. average. EIA notes that "Connecticut has the highest average retail electricity rates among the Lower 48 states." EIA data also shows that the state ranks #10 among states for small-scale solar generation per-capita.

Climate impacts

Ranked #10 for coastal flooding by States at Risk.

Existing climate policies

In addition to the RGGI cap-and-trade system covering the electricity sector, there are a variety of programs described by EIA. In particular, "Connecticut's renewable portfolio standard (RPS) calls for 23% of electricity sold in the state to come from renewable energy sources by 2020."

Carbon pricing activism

(1) A carbon tax bill (Raised Bill No. 7247) has been introduced in the 2017 state legislature; see articles in the Connecticut Post and the Hartford Business Journal. The legislative text stipulates a carbon fee of $15 per ton of CO2 in 2019, increasing by $5 per ton per year unless adjusted by a Carbon Pollution Council tasked with achieving the emissions reductions targets established by California's Global Warming Solutions Act of 2006 (AB32). The revenue is allocated 25% to mitigation and adaptation programs; 30% to businesses through a per-employee tax credit; 40% to residents in a per-capita tax credit; and 5% to administration. The carbon fee will be reduced by the amount of any federal carbon price if one is adopted, and the carbon fee does not take effect unless Massachusetts and Rhode Island

also pass carbon pricing legislation. (2) There are no NGO campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

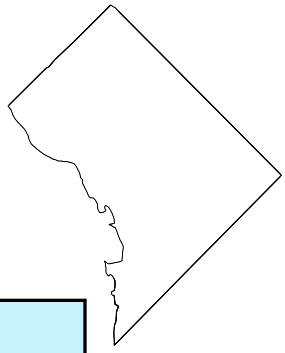
Citizens and the legislature are very liberal. The state Senate is split 18-18 (with a Democratic Lieutenant Governor casting the tie-breaking vote) and the House is controlled by Democrats (79-72); the Governor is a Democrat. The state has 7 electoral college votes (tied for #27).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Connecticut	Rank
Global warming is mostly caused by human activities	53%	57%	9
Worried about global warming	58%	61%	8
Global warming will harm me personally	40%	41%	13
Support regulating CO2 as a pollutant	75%	77%	9
Support carbon tax if refunded (2014)	44%	45%	13
Support or undecided about carbon tax (2014)	75%	74%	30

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Connecticut.



DC

Promising

Summary: DC is promising.

There is an active carbon tax campaign underway. There are zero industrial sector emissions and citizens are very liberal and supportive on climate issues. DC joins Hawaii and New York as the only jurisdictions where carbon taxes polled above 50% in 2014 (54%, ranked #1). Also, DC ranks #13 for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. The main challenge is the small size of the District. There is a ballot measure option in DC, but it has been used fairly infrequently.

Emissions

Per-capita emissions in 2014 were 0.25x the U.S. average, with zero industrial sector emissions. (There were also zero electricity sector emissions, but over 99% of DC power consumption comes from imports.) Transportation sector emissions were also extremely low, but commercial sector emissions were very high.

Tonnes CO2 (2014)	U.S. (per capita)	DC (per capita)	DC (% of total)
Total	17.0	4.5	100%
Commercial	0.7	1.5	34%
Electric Power	6.3	0.0	0%
Residential	1.1	1.3	28%
Industrial	3.0	0.0	1%
Transportation	5.8	1.7	37%

Source: 2014 data from EIA SEDS

Electricity sector notes

EIA has an overview of DC, which imports almost all of its power. EIA data also shows that DC ranks #13 among states for small-scale solar generation per-capita.

Climate impacts

DC is not included in the States at Risk report.

Existing climate policies

EIA describes a variety of policies, including an RPS.

Carbon pricing activism

A carbon pricing campaign is being led by the DC Carbon Fee and Rebate coalition; see also the summary from Climate X-Change's State Carbon Pricing Network. Details are scarce, but the coalition website suggests that the carbon tax would start at $20 per ton of CO2 and that "nearly all of the money raised would be returned in equal amounts — through a quarterly 'rebate' — to every D.C. resident."

Ideology

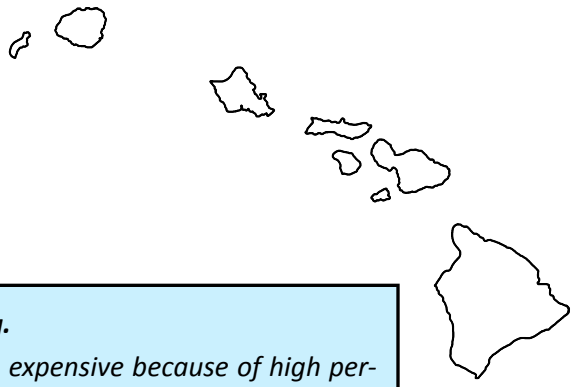
Citizens are very liberal. DC has 3 electoral college votes (tied for fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	DC	Rank
Global warming is mostly caused by human activities	53%	67%	1
Worried about global warming	58%	74%	1
Global warming will harm me personally	40%	51%	1
Support regulating CO2 as a pollutant	75%	86%	1
Support carbon tax if refunded (2014)	44%	54%	1
Support or undecided about carbon tax (2014)	75%	78%	3

Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there were 0 in 2016 and 1 in 2014) go directly to the ballot as statute.



Hawaii

Promising

Summary: Hawaii is promising.

The main challenge may be that fossil fuels are already quite expensive because of high per-capita travel. Grounds for optimism include extremely low industrial sector emissions, very liberal citizens and legislature that are supportive on climate issues, the potential for climate change to disrupt Hawaii's beaches, economy and natural environment, and excellent opportunities for renewable power. In fact, Hawaii is far and away #1 in small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. Hawaii joins New York and DC as the only jurisdictions where carbon taxes poll above 50% (51%, rank #3). There is no ballot measure option in Hawaii.

Emissions

Per-capita emissions in 2014 were 0.8x the U.S. average, with extremely low industrial sector emissions and low electricity sector emissions. Commercial sector emissions were extremely low, and residential sector emissions were negligible. Above-average transportation sector emissions were presumably due to jet fuel for personal travel, tourism and air freight.

Tonnes CO2 (2014)	U.S. (per capita)	Hawaii (per capita)	Hawaii (% of total)
Total	17.0	13.0	100%
Commercial	0.7	0.2	2%
Electric Power	6.3	4.7	36%
Residential	1.1	0.0	0%
Industrial	3.0	1.0	8%
Transportation	5.8	7.0	54%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,599 lbs CO2/MWh) was 1.5x the U.S. average. EIA notes that "[i]n 2014, for the first time, net generation from petroleum slipped below 70%. Renewable source — mainly wind, biomass, and geothermal generators — supplied 13% of the state's electricity from utility-scale generators in 2014 and 14% in 2015, nearly the same amount as was generated by coal. Use of distributed (customer-sited small-scale) renewable sources, like rooftop solar panels, has increased rapidly. In 2015, one in eight Hawaiian residential electricity customers had solar panels. If generation from distributed sources is included, Hawaii obtained nearly one-fifth of its net electricity generated and more than 23% of electricity sold to consumers from renewable sources in 2015." EIA data also shows that the state ranks #1 among states for small-scale solar generation per-capita (more than double the next state, Arizona).

Climate impacts

No top rankings from States at Risk.

Existing climate policies

EIA describes various policies, including an RPS of 40% by 2030 and 100% by 2045.

Carbon pricing activism

A nascent campaign is described by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens and the legislature are very liberal. Democrats control the state Senate (25-0), the House (45-6), and the Governor's office. The state has 4 electoral college votes (tied for second-fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Hawaii	Rank
Global warming is mostly caused by human activities	53%	62%	2
Worried about global warming	58%	69%	2
Global warming will harm me personally	40%	47%	2
Support regulating CO2 as a pollutant	75%	81%	2
Support carbon tax if refunded (2014)	44%	51%	3
Support or undecided about carbon tax (2014)	75%	78%	4

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Hawaii.

Illinois

Promising

Summary: Illinois is promising.

Industrial and electricity sector emissions are average, citizens and the legislature are liberal-to-very-liberal and supportive on climate issues, there is grassroots strength for climate action, and Illinois is ranked 4th in terms of support for a carbon tax (49% support). There is no relevant ballot measure option in Illinois.

Emissions

Per-capita emissions in 2014 were 1.1x the U.S. average, with average industrial and electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Illinois (per capita)	Illinois (% of total)
Total	17.0	18.2	100%
Commercial	0.7	1.1	6%
Electric Power	6.3	6.8	38%
Residential	1.1	2.1	12%
Industrial	3.0	3.1	17%
Transportation	5.8	5.1	28%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (956 lbs CO2/MWh) was 0.9x the U.S. average. The per-capita emissions figure for 2014 is above-average because about 23% of power generation is exported. EIA notes that power generation is roughly 50% nuclear, 40% coal, and 10% natural gas and/or wind.

Climate impacts

Ranked #19 for extreme heat by States at Risk.

Existing climate policies

EIA notes that "The Illinois renewable portfolio standard (RPS) requires that all investor-owned electric utilities and alternative retail electricity suppliers obtain increasing proportions of their retail sales from renewable resources. The requirements started at 2% renewables in 2009 and will reach 25% by 2026."

Carbon pricing activism

(1) Ranked #6 by one climate-focused group in terms of per-capita strength (and as a potentially strong focal-point state by another). (2) Climate X-Change's State Carbon Pricing Network says a listing for a campaign is "coming soon."

Ideology and politics

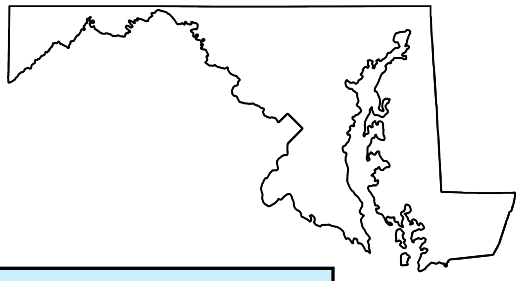
Citizens are liberal; the legislature is liberal to very liberal. Democrats control the state Senate (37-22) and House (67-51) but Republicans control the Governor's office. The state has 20 electoral college votes (tied for #5).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Illinois	Rank
Global warming is mostly caused by human activities	53%	56%	11
Worried about global warming	58%	60%	13
Global warming will harm me personally	40%	40%	18
Support regulating CO2 as a pollutant	75%	78%	8
Support carbon tax if refunded (2014)	44%	49%	4
Support or undecided about carbon tax (2014)	75%	77%	9

Source: Yale Climate Opinion Maps

Ballot measures

As far as carbon pricing is concerned, there are no ballot measures opportunities in Illinois, which has not had a citizen initiative since 1981. According to Ballotpedia: "Initiated measures in Illinois may only amend Article IV [The Legislature] of the Illinois Constitution." Also: "Due to the fact that the Illinois initiative process is so limited and so difficult, many initiative scholars do not even count it as an initiative state."



Maryland

Promising

Summary: Maryland is promising.

Grounds for optimism include very low industrial sector emissions and the generally liberal views of citizens and the legislature. Also, Maryland ranks #9 among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. There is no ballot measure option in Maryland. Note that Maryland is a member of RGGI, the electricity sector cap-and-trade program that covers nine northeast states.

Emissions

Per-capita emissions in 2014 were 0.6x the U.S. average, with extremely low industrial sector emissions and low electricity sector emissions (but note that about 45% of power consumption is imported).

Tonnes CO2 (2014)	U.S. (per capita)	Maryland (per capita)	Maryland (% of total)
Total	17.0	10.3	100%
Commercial	0.7	0.8	8%
Electric Power	6.3	3.2	31%
Residential	1.1	1.2	11%
Industrial	3.0	0.4	4%
Transportation	5.8	4.7	45%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,108 lbs CO2/MWh) was 1.0x the U.S. average. EIA notes that "nuclear and coal-fired power supply almost four-fifths of Maryland's net electricity generation" and that "all but one of Maryland's coal-fired power plants are more than 30 years old, and about one-third of the state's coal-fired generating capacity is scheduled for retirement between 2015 and 2020." EIA data also shows that the state ranks #9 among states for small-scale solar generation per-capita.

Climate impacts

No top rankings from States at Risk.

Existing climate policies

In addition to being a member of the RGGI cap-and-trade system covering the electricity sector, Maryland has a Renewable Portfolio Standard requiring 25% renewables by 2020; see EIA for details.

Carbon pricing activism

(1) A carbon pricing campaign is being led by the Maryland Climate Coalition; see also the summary from Climate X-Change's State Carbon Pricing Network. The latter website offers up the only available details: "While there is no legislation written yet, the campaign plans to use support built throughout this year… to introduce a carbon pricing bill [in 2018] or issue a Referendum for Congressional action as was done in California with AJR-43." (2) Separately, Maryland is ranked as a strong state by one climate-focused group.

Ideology and politics

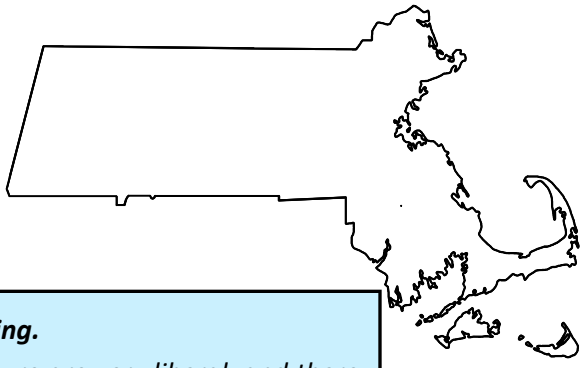
Citizens and the legislature are very liberal. Democrats control the state Senate (33-14) and House (90-51), but Republicans control the Governor's office. The state has 10 electoral college votes (tied for #18).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Maryland	Rank
Global warming is mostly caused by human activities	53%	58%	4
Worried about global warming	58%	63%	6
Global warming will harm me personally	40%	43%	5
Support regulating CO2 as a pollutant	75%	78%	7
Support carbon tax if refunded (2014)	44%	49%	5
Support or undecided about carbon tax (2014)	75%	78%	6

Source: Yale Climate Opinion Maps

Ballot measures

There are no pro-active ballot measures in Maryland.



Massachusetts

Promising

Summary: Massachusetts is promising.

Industrial emissions are extremely low, citizens and the legislature are very liberal, and there is strong voter support for most climate issues (except carbon taxes, where the state ranks close to the national average). Massachusetts ranks #5 among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. There is a ballot measure option in Massachusetts, but the existing campaigns underway in the state are legislative. Massachusetts is a member of RGGI, the electricity sector cap-and-trade program that covers nine northeast states. While the Massachusetts state constitution appears to require revenues from taxes on gasoline and diesel (≈45% of emissions) to go to transportation purposes, which may be highways or public transit, this need not impinge on carbon tax bills currently before the state legislature (see discussion at end of this section).

Emissions

Per-capita emissions in 2014 were 0.6x the U.S. average, with extremely low industrial sector emissions and extremely low electricity sector emissions (note that almost 50% of power consumed is imported).

Tonnes CO2 (2014)	U.S. (per capita)	Massachusetts (per capita)	Massachusetts (% of total)
Total	17.0	9.5	100%
Commercial	0.7	1.1	11%
Electric Power	6.3	1.6	17%
Residential	1.1	2.0	21%
Industrial	3.0	0.5	5%
Transportation	5.8	4.3	45%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (920 lbs CO2/MWh) was 0.8x the U.S. average. The very low per-capita emissions figure for 2014 appears to be due to imports (EIA figures show that almost 50% of power consumed is imported) and low consumption by the industrial and residential sectors. EIA data also shows that the state ranks #5 among states for small-scale solar generation per-capita.

Climate impacts

Ranked #7 for coastal flooding by States at Risk.

Existing climate policies

In addition to being a member of the RGGI cap-and-trade system covering the electricity sector, Massachusetts has a Renewable Portfolio Standard, an Alternative Energy Portfolio Standard, and various other policies detailed by EIA.

Carbon pricing activism

(1) A carbon pricing campaign is being led by Climate X-Change and other members of the Campaign for a Clean Energy Future; see also the summary from Climate X-Change's State Carbon Pricing Network,

which notes that "There are currently two key bills in the Massachusetts legislature that focus on putting a fee on carbon pollution. Senator Michael Barrett's An Act Combating Climate Change is the carbon pricing bill in the Senate, and Representative Jennifer Benson has put forth An Act to Promote Green Infrastructure, Reduce Greenhouse Gas Emissions, and Create Jobs in the House." The legislative text for Senator Barrett's bill, S.1821, includes a carbon tax of $10 per ton of carbon dioxide, rising by $5 each year to a maximum of $40, with tax revenue attributable to employers to be returned to employers as an equal rebate per employee, and tax revenue attributable to residents to be returned to residents as an equal per-resident rebate, except that rural residents receive an extra "motor vehicle fuel rebate." The legislative text for Representative Benson's bill, H.1726, includes the same carbon tax rate, with 20% of revenue allocated to a Green Infrastructure Fund and the remainder divided (as above) between residents and employers, with employers receiving an equal rebate per-employee and residents receiving equal per-resident rebates, except that a child receives 50% of the adult rebate and additional funds are set aside for the Low Income Home Energy Assistance Program and for additional rebates to low-income and rural households. (2) Massachusetts was also ranked as a strong state by one climate-focused group.

Ideology and politics

Citizens and the legislature are very liberal. Democrats control the state Senate (34-6) and the House (125-35), but Republicans control the Governor's office. The state has 11 electoral college votes (tied for #14).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Massachusetts	Rank
Global warming is mostly caused by human activities	53%	56%	10
Worried about global warming	58%	62%	7
Global warming will harm me personally	40%	42%	9
Support regulating CO2 as a pollutant	75%	78%	6
Support carbon tax if refunded (2014)	44%	43%	28
Support or undecided about carbon tax (2014)	75%	73%	38

Source: Yale Climate Opinion Maps

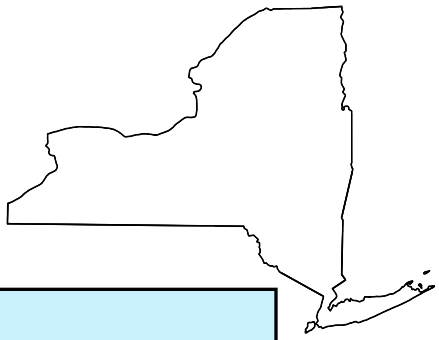
Ballot measures

Citizen initiatives (there were 4 in 2016 alone) go directly to the ballot, either as statute or as constitutional amendments. More here, and note that Ballotpedia says that measures may not propose "laws that make specific appropriations."

Legal note

Article 78 of the Massachusetts Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes or mass transit. See Article of amendment CIV (104): "Article LXXVIII of the Amendments to the Constitution is hereby annulled and the following is adopted in place thereof: Art. LXXVIII. No revenue from fees, duties, excises or license taxes relating to registration, operation or use of vehicle on public highways, or to fuels used for propelling such vehicles, shall be expended for other than cost of administration of laws providing for such revenue, making of refunds and adjustments in relation thereto, payment of highway obligations, or cost of construction, reconstruction, maintenance and repair of public highways and bridges, and mass transportation lines and of the enforcement of state traffic laws, and for other mass transportation purposes; and such revenue shall be expended by the commonwealth or its counties, cities and towns for said highway and mass transportation purposes only and in such manner as the general court may direct; provided, that this amendment shall not apply to revenue from any excise tax imposed in lieu of local property taxes for the privilege of registering such vehicles."

However, Mitchell v. Secretary of Administration (1992), a decision by the Massachusetts Supreme Judicial Court, found the governing question to be whether, in any fiscal year, the legislature has "appropriated more money for the purposes identified in [Article] 78 than the Commonwealth had received from [Article] 78 sources." At the time the state expended some General Fund revenue on transportation, a process that continues to the present day. Combined state sales tax revenues and local assessment revenues dedicated to the state's public transportation provider, the Massachusetts Bay Transportation Authority, reached $970 million in Fiscal Year 2015, a figure that is legislatively mandated to grow by 1% to 3% annually. That allocation will almost certainly exceed carbon tax revenues from motor fuels (gasoline and on-road diesel) under the Barrett and Benson bills, even with the stepwise increases in the proposed carbon tax rate to $40 per ton, suggesting that neither bill would require a net increase in highway spending.



New York

Promising

Summary: New York is promising.

Industrial and electricity sector emissions are extremely low, and citizens and the legislature are very liberal and are supportive on climate issues: New York joins Hawaii and DC as the only jurisdictions where carbon taxes poll above 50% (52%, ranked #2). However, gerrymandering and ingrained political habits have enabled conservative interests to maintain control of the State Senate for decades, and some regard state government as a graveyard for bold policy initiatives. There is no ballot measure option in New York. Note that New York is a member of RGGI, the electricity sector cap-and-trade program that covers nine northeast states.

Emissions

Per-capita emissions in 2014 were 0.5x the U.S. average, with extremely low industrial sector emissions and extremely low electricity sector emissions. Transportation sector emissions were also low.

Tonnes CO2 (2014)	U.S. (per capita)	New York (per capita)	New York (% of total)
Total	17.0	8.6	100%
Commercial	0.7	1.1	13%
Electric Power	6.3	1.5	18%
Residential	1.1	1.8	21%
Industrial	3.0	0.5	6%
Transportation	5.8	3.7	43%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (519 lbs CO2/MWh) was 0.5x the U.S. average. The per-capita emissions figure for 2014 is extremely low by any standard, but note that about 10-15% of power consumed is imported.

Climate impacts

Ranked #12 for extreme heat and #3 for coastal flooding by States at Risk. Note that widespread severe damage from 2012 Superstorm Sandy has raised climate consciousness across the state, a phenomenon reflected in the poll results below.

Existing climate policies

There are a variety of programs (described by EIA) in addition to the RGGI cap-and-trade system covering the electricity sector.

Carbon pricing activism

(1) A carbon pricing campaign is being led by NY Renews; Climate X-Change's State Carbon Pricing Network notes that "NY Renews is currently working to achieve first a mandate for New York State to have 100% renewable [electricity] by 2050. The second phase of the campaign will involve passing a carbon pollution fee to fund a just transition leading to good jobs, environmental justice, and worker

protection." (2) Separately, a carbon tax bill was introduced in the state legislature in 2015. This (very) short bill proposed a carbon tax starting at $35 per ton (and increasing by $15 per year to a maximum of $185), with 60% of the revenue returned as (unspecified) tax credits to "very low to moderate income residents" and the remaining 40% distributed evenly "to support the transition to one hundred percent clean energy in the state, to support mass transit, to reduce carbon emissions, and to improve climate change adaptation." (3) New York is also ranked #8 by one carbon pricing group in terms of per-capita strength, and ranked as a strong focal-point state by another group.

Ideology and politics

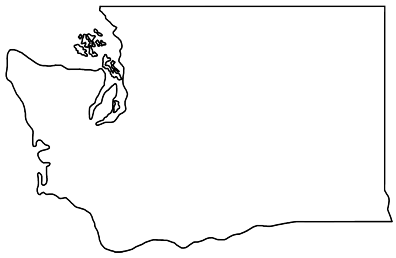
Citizens and the legislature are very liberal. Democrats control the state House (107-43) and the Governor's office, but Republicans have "functional control" of the narrowly divided state Senate. The state has 29 electoral college votes (tied for #3).

Percent agreeing, 2016, and rank (out of 51)	U.S.	New York	Rank
Global warming is mostly caused by human activities	53%	58%	5
Worried about global warming	58%	67%	3
Global warming will harm me personally	40%	45%	4
Support regulating CO2 as a pollutant	75%	81%	3
Support carbon tax if refunded (2014)	44%	52%	2
Support or undecided about carbon tax (2014)	75%	82%	1

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in New York.



Washington

Promising

Summary: Washington is promising.

Industrial and electricity sector emissions are low, and citizens and the legislature are liberal and fairly concerned about climate issues. Washington fielded the first carbon tax ballot measure in the U.S. (I-732) in 2016, and there are ongoing efforts by Governor Inslee, members of the state legislature, and organizations including the Alliance for Jobs and Clean Energy and Carbon Washington (the group behind I-732). There is much talk of new ballot measures in 2018 or 2020.

Emissions

Per-capita emissions in 2014 were 0.6x the U.S. average, with low industrial sector emissions and extremely low electricity sector emissions (even more impressive given that 10-15% of power generation is exported).

Tonnes CO2 (2014)	U.S. (per capita)	Washington (per capita)	Washington (% of total)
Total	17.0	10.4	100%
Commercial	0.7	0.5	5%
Electric Power	6.3	1.7	16%
Residential	1.1	0.7	7%
Industrial	3.0	1.7	17%
Transportation	5.8	5.8	55%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (233 lbs CO2/MWh) was 0.2x the U.S. average. EIA notes that "Hydroelectric power typically accounts for between two-thirds and four-fifths of Washington's electricity generation."

Climate impacts

Ranked #3 for drought and #5 for inland flooding by States at Risk.

Existing climate policies

EIA provides an overview of various policies, including a Renewable Portfolio Standard.

Carbon pricing activism

(1) I-732 lost at the ballot in 2016, 59% No to 41% Yes, in part because of a split over the measure within the state's green/progressive community. Multiple carbon tax bills were introduced in 2017 and there is talk from the Alliance for Jobs and Clean Energy (and perhaps others) about a 2018 ballot measure; see also the summary from Climate X-Change's State Carbon Pricing Network. (2) Washington is also ranked as a strong focal-point state by one climate-focused group.

Ideology and politics

Citizens and the legislature are liberal. Democrats control the state House (50-48) and the Governor's office, but Republicans have "functional control" over the narrowly divided state Senate. The state has 12 electoral college votes (ranked #13).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Washington	Rank
Global warming is mostly caused by human activities	53%	55%	14
Worried about global warming	58%	60%	12
Global warming will harm me personally	40%	40%	16
Support regulating CO2 as a pollutant	75%	77%	12
Support carbon tax if refunded (2014)	44%	44%	24
Support or undecided about carbon tax (2014)	75%	75%	26

Source: Yale Climate Opinion Maps

Ballot measures

There were 6 citizen initiatives in 2016. Citizen initiatives go to the ballot as statutes, either directly or indirectly. More here.

Legal note

The Washington Constitution *superficially appears to but in fact does not* require revenues from taxes on gasoline and diesel to go to highway purposes. See this unanimous 2012 state Supreme Court decision about article 2, section 40, which reads: "All fees collected by the State of Washington as license fees for motor vehicles and all excise taxes collected by the State of Washington on the sale, distribution or use of motor vehicle fuel and all other state revenue intended to be used for highway purposes, shall be paid into the state treasury and placed in a special fund to be used exclusively for highway purposes. Such highway purposes shall be construed to include the following: (a) The necessary operating, engineering and legal expenses connected with the administration of public highways, county roads and city streets; (b) The construction, reconstruction, maintenance, repair, and betterment of public highways, county roads, bridges and city streets; including the cost and expense of (1) acquisition of rights-of-way, (2) installing, maintaining and operating traffic signs and signal lights, (3) policing by the state of public highways, (4) operation of movable span bridges, (5) operation of ferries which are a part of any public highway, county road, or city street; (c) The payment or refunding of any obligation of the State of Washington, or any political subdivision thereof, for which any of the revenues described in section 1 may have been legally pledged prior to the effective date of this act; (d) Refunds authorized by law for taxes paid on motor vehicle fuels; (e) The cost of collection of any revenues described in this section: *Provided,* That this section shall not be construed to include revenue from general or special taxes or excises not levied primarily for highway purposes, or apply to vehicle operator's license fees or any excise tax imposed on motor vehicles or the use thereof in lieu of a property tax thereon, or fees for certificates of ownership of motor vehicles."

States With Some Potential

Delaware

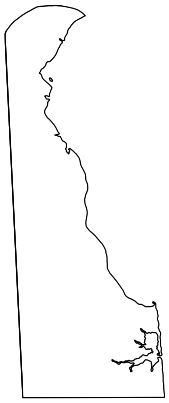
Florida

New Mexico

Rhode Island

Vermont

Virginia



Delaware

Some Potential

Summary: Delaware has some potential.

Electricity sector emissions are low, and citizens and the legislature are liberal and are fairly supportive on climate issues (although less than those in Connecticut). Also, Delaware ranks #8 among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. One challenge is high industrial sector emissions. There is no ballot measure option in Delaware. Note that Delaware is a member of RGGI, the electricity sector cap-and-trade program that covers nine northeast states.

Emissions

Per-capita emissions in 2014 were 0.8x the U.S. average, with high industrial sector emissions but low electricity sector emissions. (Note, however, that 40% of power consumed is imported.)

Tonnes CO2 (2014)	U.S. (per capita)	Delaware (per capita)	Delaware (% of total)
Total	17.0	14.2	100%
Commercial	0.7	0.9	6%
Electric Power	6.3	3.9	27%
Residential	1.1	1.1	8%
Industrial	3.0	3.9	27%
Transportation	5.8	4.5	32%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,152 lbs CO2/MWh) was 1.1x the U.S. average. The low per-capita emissions figure for 2014 is due to the fact that 40% of power consumed is imported. EIA data also shows that the state ranks #8 among states for small-scale solar generation per-capita.

Climate impacts

Ranked #9 for coastal flooding by States at Risk.

Existing climate policies

In addition to being a member of the RGGI cap-and-trade system covering the electricity sector, Delaware has a Renewable Portfolio Standard: "Originally enacted in 2005, Delaware's renewable portfolio standard (RPS) has been revised and expanded. The RPS requires retail electricity suppliers in Delaware to purchase increasing amounts of the electricity they sell in-state from renewable resources each year, with an ultimate goal of 25% from renewable resources by the compliance year of 2025-2026."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are very liberal; the legislature is liberal to very liberal. Democrats control the state Senate (11-10), the House (25-16), and the Governor's office. The state has 3 electoral college votes (tied for fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Delaware	Rank
Global warming is mostly caused by human activities	53%	55%	13
Worried about global warming	58%	58%	18
Global warming will harm me personally	40%	41%	12
Support regulating CO2 as a pollutant	75%	76%	14
Support carbon tax if refunded (2014)	44%	44%	19
Support or undecided about carbon tax (2014)	75%	73%	37

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Delaware.

Florida

Some Potential

Summary: Florida has some potential.

Grounds for optimism include low industrial sector emissions, citizens who are internalizing their personal vulnerability to climate impacts in a state that stands to be hugely affected by climate change, and the state's ranking as a strong focal-point state by one climate-focused group. In addition, Florida's abundant sunshine and southern latitude give it tremendous potential for distributed solar generation, if state policies penalizing PV owners and users could be rolled back. Challenges include a citizenry that is generally conservative, a conservative-to-very-conservative legislature, and high hurdles for ballot measures: all measures need a 60% super-majority to pass, and tax measures require two-thirds.

Emissions

Per-capita emissions in 2014 were 0.7x the U.S. average, with extremely low industrial sector emissions and below-average electricity sector emissions. Commercial and residential sector emissions were very low.

Tonnes CO2 (2014)	U.S. (per capita)	Florida (per capita)	Florida (% of total)
Total	17.0	11.5	100%
Commercial	0.7	0.3	2%
Electric Power	6.3	5.5	48%
Residential	1.1	0.1	1%
Industrial	3.0	0.6	5%
Transportation	5.8	5.1	44%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,037 lbs CO2/MWh) was 1.0x the U.S. average. The below-average per-capita emissions figure for 2014 is for in-state generation only; about 7% of power consumed is imported. EIA notes that residential consumption is high (over 90% of households use electricity for both heating and air conditioning) but industrial consumption is very low. EIA also notes that Florida has good solar potential but that "planners expect the state's electricity generating fuel mix to remain fairly stable in the next few years, with natural gas providing about three-fifths of net electricity generation and coal about one-fifth." Despite significant solar potential, state policies penalize PV owners and users, and as a result EIA data shows that the state only ranks #28 for small-scale solar generation per-capita.

Climate impacts

Ranked #2 for extreme heat, #10 for wildfire, #1 for inland flooding, and #1 for coastal flooding by States at Risk.

Existing climate policies

EIA notes that "Florida does not have a renewable energy portfolio, but it does have state and local incentives, such as net metering, for certain renewable energy technologies, including solar."

Carbon pricing activism

Ranked as a strong focal-point state by one climate-focused group, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

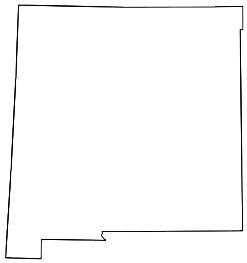
Citizens are conservative; the legislature is conservative to very conservative. Republicans control the state Senate (25-15), the House (79-41), and the Governor's office. The state has 29 electoral college votes (tied for #3) and has been a swing state during the past five Presidential campaigns.

Percent agreeing, 2016, and rank (out of 51)	U.S.	Florida	Rank
Global warming is mostly caused by human activities	53%	53%	21
Worried about global warming	58%	57%	21
Global warming will harm me personally	40%	41%	11
Support regulating CO2 as a pollutant	75%	75%	23
Support carbon tax if refunded (2014)	44%	43%	25
Support or undecided about carbon tax (2014)	75%	75%	19

Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there were 2 in 2016, 2 in 2014, and 0 in 2012) go directly to the ballot as constitutional amendments. According to Ballotpedia, all initiatives need a 60% super-majority, and tax measures need a two-thirds super-majority.



New Mexico

Some Potential

Summary: New Mexico has some potential.

Challenges include high industrial and electricity sector emissions, lack of voter support for carbon taxes relative to their climate views in general, and a moderate legislature. Grounds for optimism are that citizens are liberal, are fairly supportive on climate issues, and seem to have internalized that they are personally vulnerable to climate impacts; the state is also ranked as a strong state by one climate-focused group. Also, New Mexico ranks #12 among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. There is no ballot measure option in New Mexico.

Emissions

Per-capita emissions in 2014 were 1.4x the U.S. average, with high industrial sector emissions and high electricity sector emissions (but note that about 25% of power generation is exported).

Tonnes CO2 (2014)	U.S. (per capita)	New Mexico (per capita)	New Mexico (% of total)
Total	17.0	24.1	100%
Commercial	0.7	0.8	3%
Electric Power	6.3	11.7	49%
Residential	1.1	1.0	4%
Industrial	3.0	3.7	15%
Transportation	5.8	6.9	29%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,672 lbs CO2/MWh) was 1.5x the U.S. average. This helps explain the high per-capita emissions figure for 2014, but note also that about 25% of power generation is exported. EIA also provides these valuable insights: "Coal-fired power plants supply more than three-fifths of New Mexico's net electricity generation. Natural gas supplies most of the remaining generation, with renewable resources, primarily wind, providing almost all the rest… Coal-fired generation in New Mexico is declining as federal air quality regulations have tightened and as California has decided to stop purchasing electricity generated from coal. Shutdown of two of the four coal-fired generating units at New Mexico's largest power plant is scheduled to occur by the end of 2017… All of New Mexico's planned new electricity generating capacity will use renewable energy or natural gas." EIA data also shows that the state ranks #12 among states for small-scale solar generation per-capita.

Climate impacts

Ranked #15 for extreme heat, #4 for drought, and #5 for wildfire by States at Risk.

Existing climate policies

EIA notes that "[t]he New Mexico renewable portfolio standard requires investor-owned electric utilities to acquire 20% of electricity sold in-state from renewable energy sources by 2020. Of that 20%, at least half must come from solar and wind energy, and the balance must include shares from several other renewable sources, including distributed generation. Rural electric cooperatives are required to obtain

10% of their sales from renewable sources by 2020. New Mexico has regulatory policies that include net metering, solar easements, and interconnection standards, as well as a number of financial incentives that encourage renewable generation."

Carbon pricing activism

Ranked as a strong state by one climate-focused group, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

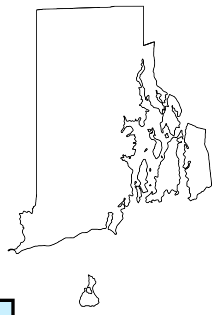
Citizens are liberal; the legislature is moderate. Democrats control the state Senate (26-16) and the House (38-22), but Republicans control the Governor's office. The state has 5 electoral college votes (tied for #36).

Percent agreeing, 2016, and rank (out of 51)	U.S.	New Mexico	Rank
Global warming is mostly caused by human activities	53%	55%	12
Worried about global warming	58%	60%	11
Global warming will harm me personally	40%	42%	7
Support regulating CO2 as a pollutant	75%	74%	25
Support carbon tax if refunded (2014)	44%	44%	22
Support or undecided about carbon tax (2014)	75%	73%	39

Source: Yale Climate Opinion Maps

Ballot measures

There are no pro-active ballot measures in New Mexico.



Rhode Island

Some Potential

Summary: Rhode Island has some potential.

Grounds for optimism include very low industrial sector emissions and the generally liberal views of citizens and the legislature. One challenge is that voters demonstrate a dislike for carbon taxes that affects some New England states. There is a legislative carbon tax campaign underway; there is no ballot measure option in Rhode Island. Note that Rhode Island is a member of RGGI, the electricity sector cap-and-trade program that covers nine northeast states.

Emissions

Per-capita emissions in 2014 were 0.6x the U.S. average, with extremely low industrial sector emissions and very low electricity sector emissions (but note that 15-25% of power consumption in recent years is from imports). Residential sector emissions were very high.

Tonnes CO2 (2014)	U.S. (per capita)	Rhode Island (per capita)	Rhode Island (% of total)
Total	17.0	10.1	100%
Commercial	0.7	1.1	11%
Electric Power	6.3	2.4	23%
Residential	1.1	2.2	22%
Industrial	3.0	0.6	5%
Transportation	5.8	3.9	39%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (911 lbs CO2/MWh) was 0.8x the U.S. average. (EIA notes that about 95% comes from natural gas.) The very low per-capita emissions figure for 2014 is partly due to imports and low consumption by the industrial and residential sectors.

Climate impacts

No top rankings from States at Risk.

Existing climate policies

In addition to being a member of the RGGI cap-and-trade system covering the electricity sector, Rhode Island has a "renewable energy standard (RES) [that] requires retail electricity providers to obtain [14.5]% of power sold in the state from renewable resources by the end of 2020." See EIA for details.

Carbon pricing activism

A carbon pricing campaign is being led by the EnergizeRI Coalition; Climate X-Change's State Carbon Pricing Network reports: "The bill proposes a fee of $15 per ton of carbon dioxide emitted, which is increased by $5 (based on 2016 dollars) each fiscal year beginning January 1, 2020. It also establishes a clean energy and jobs fund, with 25% going towards energy efficiency and renewable energy programs, 30% used to provide dividends to employers [an equal amount per employee], and 40% used to provide

dividends to Rhode Island residents [an equal amount per person]. This bill is based on a regional approach, so it will only take effect if either Massachusetts or Connecticut pass similar legislation." See also the complete legislative text.

Ideology and politics

Citizens and the legislature are very liberal. Democrats control the state Senate (33-5), the House (64-10), and the Governor's office. The state has 4 electoral college votes (tied for second-fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Rhode Island	Rank
Global warming is mostly caused by human activities	53%	57%	8
Worried about global warming	58%	60%	10
Global warming will harm me personally	40%	41%	14
Support regulating CO2 as a pollutant	75%	77%	10
Support carbon tax if refunded (2014)	44%	43%	35
Support or undecided about carbon tax (2014)	75%	72%	45

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Rhode Island.

Vermont

Some Potential

Summary: Vermont has some potential.

Grounds for optimism include extremely low industrial sector emissions and the unusually liberal views of citizens and the legislature. Also, Vermont ranks #7 among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable, and Efficiency Vermont, a statewide NGO, is highly respected as a provider of money-saving efficiency and renewable solutions. Challenges include voters who seem to have concluded that they are not very vulnerable to climate impacts and who demonstrate a dislike for carbon taxes that affects some New England states. There is a legislative campaign underway; there is no ballot measure option in Vermont. Note that Vermont is a member of RGGI, the electricity sector cap-and-trade program that covers nine northeast states.

Emissions

Per-capita emissions in 2014 were 0.6x the U.S. average, with extremely low industrial sector emissions and almost zero electricity sector emissions (but note that over 30% of power consumption was imported). Residential sector emissions were very high.

Tonnes CO2 (2014)	U.S. (per capita)	Vermont (per capita)	Vermont (% of total)
Total	17.0	9.4	100%
Commercial	0.7	1.2	13%
Electric Power	6.3	0.0	0%
Residential	1.1	2.2	23%
Industrial	3.0	0.7	8%
Transportation	5.8	5.2	56%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (12 lbs CO2/MWh) was 0.01x (!) the U.S. average. (EIA notes that "[a]bout three-fifths of in-state generation came from hydroelectric power, with the remainder supplied by biomass, wind, and solar energy.") Note, however, that at the end of 2014 the Vermont Yankee nuclear power plant closed and in 2015 over 30% of power consumption was imported. EIA data also shows that the state ranks #7 among states for small-scale solar generation per-capita.

Climate impacts

No top rankings from States at Risk.

Existing climate policies

There are a variety of policies in addition to the RGGI cap-and-trade system covering the electricity sector. See EIA for details beyond this: "[I]n 2015, the state replaced its package of economic incentives for renewables with the nation's first integrated renewable energy standard (RES). The Vermont RES makes electric utilities responsible not only for supplying renewably sourced power but also for helping consumers reduce their total fossil fuel use." The not-for-profit consultancy Efficiency Vermont is a

national leader in assisting homes and business in selecting, installing and operating energy-efficiency and renewable technologies and systems.

Carbon pricing activism

A carbon pricing campaign is being led by Energy Independent Vermont; Climate X-Change's State Carbon Pricing Network notes that "Energy Independent Vermont is supporting a carbon fee that would return 90% of the revenue in the form of rebates and other tax relief… [T]he other 10% would be invested to help Vermont residents lower their energy bills and fossil fuel usage through energy efficiency and clean energy programs… The coalition will be working on a few bills to be introduced during the current legislative session over the next few weeks."

Ideology and politics

Citizens and the legislature are very liberal. Democrats control the state Senate (23-7) and the House (84-53, with 13 independents), but Republicans control the Governor's office. The state has 3 electoral college votes (tied for fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Vermont	Rank
Global warming is mostly caused by human activities	53%	57%	7
Worried about global warming	58%	61%	9
Global warming will harm me personally	40%	38%	23
Support regulating CO2 as a pollutant	75%	79%	5
Support carbon tax if refunded (2014)	44%	43%	37
Support or undecided about carbon tax (2014)	75%	71%	47

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Vermont.

Virginia

Some Potential

Summary: Virginia has some potential.

Challenges include citizens and a legislature that are moderate to conservative and somewhat skeptical on climate issues. Grounds for optimism include low industrial and electricity sector emissions and relatively high support for carbon taxes (47%, ranked #8). There is no ballot measure option in Virginia.

Emissions

Per-capita emissions in 2014 were 0.7x the U.S. average, with very low industrial sector emissions and low electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Virginia (per capita)	Virginia (% of total)
Total	17.0	12.5	100%
Commercial	0.7	0.6	5%
Electric Power	6.3	3.6	29%
Residential	1.1	0.8	7%
Industrial	3.0	1.5	12%
Transportation	5.8	5.9	47%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (910 lbs CO2/MWh) was 0.8x the U.S. average. (EIA notes that generation is about 40% natural gas and 30% nuclear, with coal accounting for most of the rest.) The low per-capita emissions figure for 2014 is largely because 30-40% of power is imported.

Climate impacts

Ranked #6 for coastal flooding by States at Risk.

Existing climate policies

EIA notes that "Virginia has established a voluntary renewable portfolio goal encouraging investor-owned utilities to acquire 15% of base year 2007 sales from eligible renewable technologies by 2025. Virginia also enacted a mandatory utility green power option in 2007 that gives electric utility customers the option of purchasing all of their electricity from renewable energy sources."

Carbon pricing activism

Climate X-Change's State Carbon Pricing Network says a listing for a campaign is "coming soon."

Ideology and politics

Citizens and the legislature are moderate to conservative. Republicans control the state Senate (21-19) and the House (66-34), but Democrats control the Governor's office. The state has 13 electoral college votes (ranked #12).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Virginia	Rank
Global warming is mostly caused by human activities	53%	54%	15
Worried about global warming	58%	59%	16
Global warming will harm me personally	40%	41%	15
Support regulating CO2 as a pollutant	75%	76%	16
Support carbon tax if refunded (2014)	44%	47%	8
Support or undecided about carbon tax (2014)	75%	77%	11

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Virginia.

Challenging States For Legal Reasons

California

Colorado

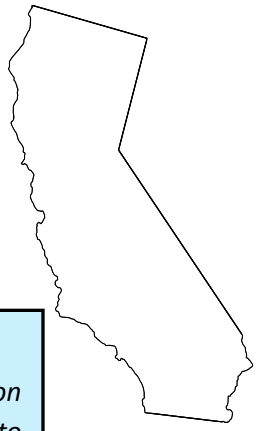
Michigan

Nevada

New Hampshire

New Jersey

Oregon



California

Challenging (Legal)

Summary: California is challenging for legal reasons only.

California is challenging for two and possibly three legal reasons. First, the state constitution appears to require revenues from taxes on gasoline and diesel (≈56% of emissions) to go to highway purposes and/or mass transit. (This challenge could potentially be addressed by funneling these funds to the proposed high-speed rail system between San Francisco and Los Angeles, but the level of long-term political support for this rail system is questionable.) Second, California has many existing laws, including an economy-wide cap-and-trade system (AB32) that may or may not expire in 2020, and navigating the resulting legal and political thicket is likely to be difficult. Third, the California constitution also has a mandate about education spending that may be relevant for carbon tax policy. Absent these concerns — and/or if a carbon tax approach gains momentum as an alternative to a soon-to-expire AB32 — California would be promising: grounds for optimism include low industrial and electricity sector emissions; liberal citizens and legislature that are concerned about climate issues; and high degree of citizens internalizing their personal vulnerability to climate impacts. Also, California ranks #3 among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. There is a ballot measure option in California.

Emissions

Per-capita emissions in 2014 were 0.6x the U.S. average, with low industrial sector emissions and very low electricity sector emissions. (Note, however, that 30% of power consumed is imported.)

Tonnes CO2 (2014)	U.S. (per capita)	California (per capita)	California (% of total)
Total	17.0	9.3	100%
Commercial	0.7	0.4	4%
Electric Power	6.3	1.2	13%
Residential	1.1	0.6	6%
Industrial	3.0	1.9	20%
Transportation	5.8	5.2	56%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (621 lbs CO2/MWh) was 0.6x the U.S. average. The very low per-capita emissions figure for 2014 is partly due to this low emissions rate but is also due to the 30% of power that is imported and to low industrial sector consumption. EIA notes that "the state leads the nation in net electricity generation from solar, geothermal, and biomass. California is also a leading producer of electricity from conventional hydroelectric power and from wind, ranking fourth in the nation in both." EIA data also shows that the state ranks #3 among states for per-capita small-scale solar generation, and #1 by far for total solar generation (i.e., not normalized by population).

Climate impacts

Ranked #3 for extreme heat, #13 for drought, #2 for wildfire, #2 for inland flooding, and #8 for coastal flooding by States at Risk.

Existing climate policies

EIA describes a host of programs, including the AB32 cap-and-trade system. Note, however, that the future of the cap-and-trade system beyond 2020 is in some doubt.

Carbon pricing activism

Lots of existing groups, plus California is ranked #1 by one carbon pricing group in terms of per-capita strength, and ranked as a strong focal-point state by another climate-focused group. But there are no campaigns listed by Climate X-Change's State Carbon Pricing Network

Ideology and politics

Citizens are liberal; the legislature is very liberal and has a tradition of pro-active and innovative legislation on environmental issues. Democrats control the state Senate (27-13), the House (55-25), and the Governor's office. The state has 55 electoral college votes (ranked #1).

Percent agreeing, 2016, and rank (out of 51)	U.S.	California	Rank
Global warming is mostly caused by human activities	53%	59%	3
Worried about global warming	58%	65%	4
Global warming will harm me personally	40%	47%	3
Support regulating CO2 as a pollutant	75%	77%	11
Support carbon tax if refunded (2014)	44%	47%	7
Support or undecided about carbon tax (2014)	75%	77%	8

Source: Yale Climate Opinion Maps

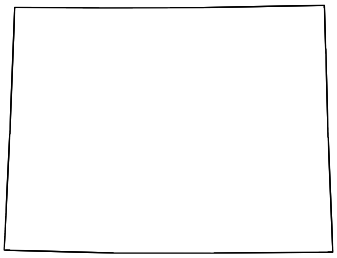
Ballot measures

Citizen initiatives (there were 15 in 2016 alone) go directly to the ballot, either as statute or as constitutional amendments. More here.

Legal note

The California Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes *and mass transit*. See article 19, section 1: "Revenues from taxes imposed by the State on motor vehicle fuels for use in motor vehicles upon public streets and highways, over and above the costs of collection and any refunds authorized by law, shall be used for the following purposes: (a) The research, planning, construction, improvement, maintenance, and operation of public streets and highways (and their related public facilities for nonmotorized traffic), including the mitigation of their environmental effects, the payment for property taken or damaged for such purposes, and the administrative costs necessarily incurred in the foregoing purposes. (b) The research, planning, construction, and improvement of exclusive public mass transit guideways (and their related fixed

facilities), including the mitigation of their environmental effects, the payment for property taken or damaged for such purposes, the administrative costs necessarily incurred in the foregoing purposes, and the maintenance of the structures and the immediate right-of-way for the public mass transit guideways, but excluding the maintenance and operating costs for mass transit power systems and mass transit passenger facilities, vehicles, equipment, and services." But note also section 7: "This article shall not affect or apply to fees or taxes imposed pursuant to the Sales and Use Tax Law or the Vehicle License Fee Law, and all amendments and additions now or hereafter made to such statutes."



Colorado

Challenging (Legal)

Summary: Colorado is challenging for legal reasons only.

Colorado is challenging because the state constitution (1) includes a Taxpayer's Bill of Rights (TABOR) that appears to require a vote of the people for any carbon tax policy, and (2) appears to require revenues from taxes on gasoline and diesel (≈31% of emissions) to go to highway purposes. Absent these concerns, Colorado would have some potential: grounds for optimism include moderate-to-liberal citizens and legislature and a relatively strong grassroots climate movement. Also, Colorado ranks #11 among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. There is a ballot measure option in Colorado.

Emissions

Per-capita and sectoral emissions in 2014 mirrored the national averages.

Tonnes CO2 (2014)	U.S. (per capita)	Colorado (per capita)	Colorado (% of total)
Total	17.0	17.1	100%
Commercial	0.7	0.7	4%
Electric Power	6.3	7.0	41%
Residential	1.1	1.5	9%
Industrial	3.0	2.7	16%
Transportation	5.8	5.2	31%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,571 lbs CO2/MWh) was 1.4x the U.S. average. This is only partly reflected in the per-capita emissions figure for 2014 in part because 5-10% of power consumed is imported. EIA notes that coal and natural gas account for about 60% and 20% of power generation, respectively. But EIA also notes that "Electricity from renewable sources has tripled since 2007, to more than one-sixth of net electricity generation in 2015, almost all because of increased wind generation" and that "Colorado's largest utility has committed to replace some older coal-fired capacity with natural gas and renewable generation sources." EIA data also shows that the state ranks #11 among states for small-scale solar generation per-capita.

Climate impacts

Ranked #6 for drought by States at Risk.

Existing climate policies

EIA notes that "In 2004, Colorado became the first state with a voter-approved renewable portfolio standard (RPS). The legislature has increased requirements several times since, and the RPS now requires 30% of electricity sold by investor-owned utilities to come from renewable energy sources by 2020, with 3% from distributed generation. Separate requirements apply to municipal and cooperative electricity suppliers depending on their size. The RPS and other state support for the efficiency and

renewable energy industries have attracted private investment and have made Colorado a clean energy industry leader."

Carbon pricing activism

Ranked #5 by one carbon pricing group in terms of per-capita strength, and ranked as a potentially strong focal-point state by another group, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are moderate; the legislature is liberal. Democrats control the House (37-28) and the Governor's office, but Republicans control the state Senate (18-17). The state has 9 electoral college votes (tied for #22).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Colorado	Rank
Global warming is mostly caused by human activities	53%	53%	19
Worried about global warming	58%	58%	17
Global warming will harm me personally	40%	39%	21
Support regulating CO2 as a pollutant	75%	74%	26
Support carbon tax if refunded (2014)	44%	44%	18
Support or undecided about carbon tax (2014)	75%	74%	29

Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there were 7 in 2016 alone) go directly to the ballot, either as statute or as constitutional amendments. More here.

Legal note

The Colorado Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes, and revenues from taxes on aviation fuel to aviation purposes. See article 10, section 18: "On and after July 1, 1935, the proceeds from the imposition of any license, registration fee, or other charge with respect to the operation of any motor vehicle upon any public highway in this state and the proceeds from the imposition of any excise tax on gasoline or other liquid motor fuel except aviation fuel used for aviation purposes shall, except costs of administration, be used exclusively for the construction, maintenance, and supervision of the public highways of this state. Any taxes imposed upon aviation fuel shall be used exclusively for aviation purposes."

Michigan

Challenging (Legal)

Summary: Michigan is challenging for legal reasons only.

Michigan is challenging because the state constitution appears to require 90% of revenues from taxes on gasoline and diesel (≈30% of emissions) to go to highway purposes. Absent this concern, Michigan would have some potential: grounds for optimism include low industrial sector emissions, generally liberal citizens, and unexpectedly strong support (46%, ranked #9) for a carbon tax. On the minus side, the legislature is moderate-to-conservative. There is a ballot measure option in Michigan, but it has been used infrequently.

Emissions

Per-capita emissions in 2014 were slightly below the U.S. average, with low industrial sector emissions and average electricity sector emissions. Residential sector emissions were very high.

Tonnes CO2 (2014)	U.S. (per capita)	Michigan (per capita)	Michigan (% of total)
Total	17.0	16.4	100%
Commercial	0.7	1.2	7%
Electric Power	6.3	6.0	37%
Residential	1.1	2.2	13%
Industrial	3.0	2.1	13%
Transportation	5.8	4.9	30%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,307 lbs CO2/MWh) was 1.2x the U.S. average. EIA notes that power generation is almost 50% coal and more than 25% nuclear and that "natural gas fuels much of the rest, with renewables, particularly wind, contributing a small but increasing share." EIA also notes that the Great Lakes provide Michigan with "a substantial offshore wind resource."

Climate impacts

Ranked #18 for extreme heat and #9 for drought by States at Risk.

Existing climate policies

EIA describes a Renewable Portfolio Standard (RPS) that apparently ended in 2015 and also notes that "Michigan offers tax incentives in Renewable Energy Renaissance Zones (RERZs)."

Carbon pricing activism

Ranked #7 by one carbon pricing group in terms of per-capita strength, and ranked as a potentially strong focal-point state by another, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are ranked as liberal and the legislature as moderate to conservative, but Republicans control the state Senate (27-11), the House (63-47), and the Governor's office. The state has 16 electoral college votes (tied for #8).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Michigan	Rank
Global warming is mostly caused by human activities	53%	54%	16
Worried about global warming	58%	56%	27
Global warming will harm me personally	40%	38%	25
Support regulating CO2 as a pollutant	75%	76%	18
Support carbon tax if refunded (2014)	44%	46%	9
Support or undecided about carbon tax (2014)	75%	74%	34

Source: Yale Climate Opinion Maps

Ballot measures

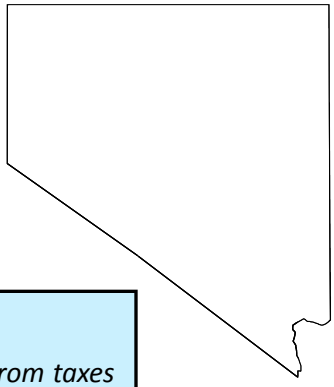
Citizen initiatives (there were 0 in 2016, 0 in 2014, and 5 in 2012) go directly or indirectly to the ballot, either as statute or as constitutional amendments. More here.

Legal note

The Michigan Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 9, section 9: "All specific taxes, except general sales and use taxes and regulatory fees, imposed directly or indirectly on fuels sold or used to propel motor vehicles upon highways and to propel aircraft and on registered motor vehicles and aircraft shall, after the payment of necessary collection expenses, be used exclusively for transportation purposes as set forth in this section.

"Not less than 90 percent of the specific taxes, except general sales and use taxes and regulatory fees, imposed directly or indirectly on fuels sold or used to propel motor vehicles upon highways and on registered motor vehicles shall, after the payment of necessary collection expenses, be used exclusively for the transportation purposes of planning, administering, constructing, reconstructing, financing, and maintaining state, county, city, and village roads, streets, and bridges designed primarily for the use of motor vehicles using tires, and reasonable appurtenances to those state, county, city, and village roads, streets, and bridges.

"The balance, if any, of the specific taxes, except general sales and use taxes and regulatory fees, imposed directly or indirectly on fuels sold or used to propel motor vehicles upon highways and on registered motor vehicles, after the payment of necessary collection expenses; 100 percent of the specific taxes, except general sales and use taxes and regulatory fees, imposed directly or indirectly on fuels sold or used to propel aircraft and on registered aircraft, after the payment of necessary collection expenses; and not more than 25 percent of the general sales taxes, imposed directly or indirectly on fuels sold to propel motor vehicles upon highways, on the sale of motor vehicles, and on the sale of the parts and accessories of motor vehicles, after the payment of necessary collection expenses; shall be used exclusively for the transportation purposes of comprehensive transportation purposes as defined by law."



Nevada

Challenging (Legal)

Summary: Nevada is challenging for legal reasons only.

Nevada is challenging because the state constitution appears to require revenues from taxes on gasoline and diesel (≈38% of emissions) to go to highway purposes. Absent this concern, Nevada would be promising: grounds for optimism include low industrial sector emissions, a moderate legislature, and moderate citizens who are somewhat supportive of climate issues (especially carbon taxes). Also, Nevada ranks #6 among states for small-scale solar generation per-capita — and has the capacity to rank higher if regulatory obstacles to solar development are removed — so that could make carbon taxing more palatable. There is a ballot measure option in Nevada.

Emissions

Per-capita emissions in 2014 were 0.8x the U.S. average, with very low industrial sector emissions and below-average electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Nevada (per capita)	Nevada (% of total)
Total	17.0	13.1	100%
Commercial	0.7	0.6	5%
Electric Power	6.3	5.6	43%
Residential	1.1	0.7	6%
Industrial	3.0	1.1	8%
Transportation	5.8	5.0	38%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (831 lbs CO2/MWh) was 0.8x the U.S. average. EIA notes that Nevada has "wind power potential" and "substantial geothermal and solar energy development, as well as some wind and landfill biomass power generation", that "natural gas fuels nearly three-fourths of Nevada's net electricity generation", and that "in compliance with a 2013 state law, Nevada's largest utility is planning to eliminate most of its coal-fired electricity generation by the end of 2019." EIA data also shows that the state ranks #6 among states for small-scale solar generation per-capita; it could rank higher if regulatory obstacles were removed.

Climate impacts

Ranked #4 for wildfire by States at Risk.

Existing climate policies

EIA notes that "Nevada's renewable portfolio standard (RPS) requires that increasing percentages of electricity sold to retail customers in Nevada must come from renewable resources, reaching the goal of 25% of retail electricity sales by 2025."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens and the legislature are moderate. Democrats control the state Senate (11-9, with 1 independent) and the House (27-15), but Republicans control the Governor's office. The state has 6 electoral college votes (tied for #30).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Nevada	Rank
Global warming is mostly caused by human activities	53%	54%	17
Worried about global warming	58%	59%	15
Global warming will harm me personally	40%	41%	10
Support regulating CO2 as a pollutant	75%	75%	20
Support carbon tax if refunded (2014)	44%	46%	10
Support or undecided about carbon tax (2014)	75%	76%	15

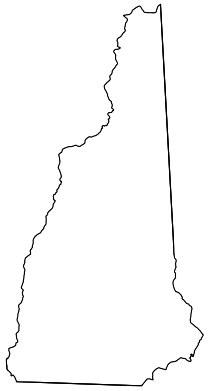
Source: Yale Climate Opinion Maps

Ballot measures

There were 4 citizen initiatives in 2016. Citizen initiatives go to the ballot indirectly as statute or directly as constitutional amendments. More here from Ballotpedia, which perhaps also notes that initiatives cannot appropriate money.

Legal note

The Nevada Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 9, section 5: "The proceeds from the imposition of any license or registration fee and other charge with respect to the operation of any motor vehicle upon any public highway in this State and the proceeds from the imposition of any excise tax on gasoline or other motor vehicle fuel shall, except costs of administration, be used exclusively for the construction, maintenance, and repair of the public highways of this State. The provisions of this section do not apply to the proceeds of any tax imposed upon motor vehicles by the Legislature in lieu of an ad valorem property tax."



New Hampshire

Challenging (Legal)

Summary: New Hampshire is challenging for legal reasons only.

New Hampshire is challenging because the state constitution appears to require revenues from taxes on gasoline and diesel (≈45% of emissions) to go to highway purposes. Absent this concern, New Hampshire would have some potential: grounds for optimism include extremely low industrial sector emissions and generally liberal citizens and legislature. On the minus side, voters are not especially supportive on climate issues; they also demonstrate a dislike for carbon taxes that affects some New England states. There is no ballot measure option in New Hampshire. Note that New Hampshire is a member of RGGI, the electricity sector cap-and-trade program that covers nine northeast states.

Emissions

Per-capita emissions in 2014 were 0.7x the U.S. average, with extremely low industrial sector emissions and very low electricity sector emissions (even more impressive given that about 40% of power generation is exported).

Tonnes CO2 (2014)	U.S. (per capita)	New Hampshire (per capita)	New Hampshire (% of total)
Total	17.0	11.3	100%
Commercial	0.7	1.0	9%
Electric Power	6.3	2.5	22%
Residential	1.1	2.0	18%
Industrial	3.0	0.6	6%
Transportation	5.8	5.1	45%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (402 lbs CO2/MWh) was 0.4x the U.S. average. EIA notes that about half of power generation is from nuclear.

Climate impacts

No top rankings from States at Risk.

Existing climate policies

EIA discusses RGGI and other measures, including "a renewable portfolio standard (RPS) that sets requirements that escalate to 2025, when 24.8% of electricity sold in state must come from renewable sources."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens and the legislature are ranked as liberal, but Republicans control the state Senate (14-10), the House (225-175), and the Governor's office. The state has 4 electoral college votes (tied for second-fewest) but has disproportionate impact during Presidential primaries.

Percent agreeing, 2016, and rank (out of 51)	U.S.	New Hampshire	Rank
Global warming is mostly caused by human activities	53%	53%	20
Worried about global warming	58%	56%	24
Global warming will harm me personally	40%	36%	32
Support regulating CO2 as a pollutant	75%	75%	22
Support carbon tax if refunded (2014)	44%	43%	33
Support or undecided about carbon tax (2014)	75%	72%	44

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in New Hampshire.

Legal note

The New Hampshire Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See part 2, article 6-a: "All revenue in excess of the necessary cost of collection and administration accruing to the state from registration fees, operators' licenses, gasoline road tolls or any other special charges or taxes with respect to the operation of motor vehicles or the sale or consumption of motor vehicle fuels shall be appropriated and used exclusively for the construction, reconstruction and maintenance of public highways within this state, including the supervision of traffic thereon and payment of the interest and principal of obligations incurred for said purposes; and no part of such revenues shall, by transfer of funds or otherwise, be diverted to any other purpose whatsoever."

New Jersey

Challenging (Legal)

Summary: New Jersey is challenging for legal reasons only.

New Jersey is challenging because the state constitution may require revenues from taxes on gasoline and diesel (≈52% of emissions) to go to highway purposes. Absent this concern, New Jersey would be promising: industrial and electricity sector emissions are very low and citizens and the legislature are liberal-to-very-liberal and are supportive on climate issues. Also, New Jersey ranks #4 among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. On the minus side, the 23 cent per gallon hike in the state gasoline tax in 2016 may have used up whatever political headroom existed for raising taxes on motor fuels. There is no ballot measure option in New Jersey.

Emissions

Per-capita emissions in 2014 were 0.75x the U.S. average, with very low industrial sector emissions and extremely low electricity sector emissions. Commercial sector emissions were very high.

Tonnes CO2 (2014)	U.S. (per capita)	New Jersey (per capita)	New Jersey (% of total)
Total	17.0	12.7	100%
Commercial	0.7	1.4	11%
Electric Power	6.3	1.9	15%
Residential	1.1	1.8	14%
Industrial	3.0	1.1	9%
Transportation	5.8	6.6	52%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (573 lbs CO2/MWh) was 0.5x the U.S. average. The per-capita emissions figure for 2014 is extremely low by any standard, but note that about 10-15% of power consumed is imported and that one of the state's three nuclear power plants is scheduled to be closed in 2019. EIA data also shows that the state ranks #4 among states for small-scale solar generation per-capita.

Climate impacts

Ranked #4 for coastal flooding by States at Risk. Note that widespread severe damage from 2012 Superstorm Sandy has raised climate consciousness in much of the state, a phenomenon reflected in the poll results below.

Existing climate policies

New Jersey withdrew from RGGI in 2011, but EIA describes a Renewable Portfolio Standard that "requires nearly one-fourth of the electricity sold in New Jersey after 2021 to come from qualified renewable sources."

Carbon pricing activism

(1) Ranked as a potentially strong focal-point state by one climate-focused group. (2) Climate X-Change's State Carbon Pricing Network says a listing for a campaign is "coming soon."

Ideology and politics

Citizens and the legislature are liberal to very liberal. Democrats control the state Senate (24-16) and the House (52-28), but Republicans control the Governor's office. The state has 14 electoral college votes (ranked #11).

Percent agreeing, 2016, and rank (out of 51)	U.S.	New Jersey	Rank
Global warming is mostly caused by human activities	53%	57%	6
Worried about global warming	58%	65%	5
Global warming will harm me personally	40%	43%	6
Support regulating CO2 as a pollutant	75%	80%	4
Support carbon tax if refunded (2014)	44%	49%	6
Support or undecided about carbon tax (2014)	75%	79%	2

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in New Jersey.

Legal note

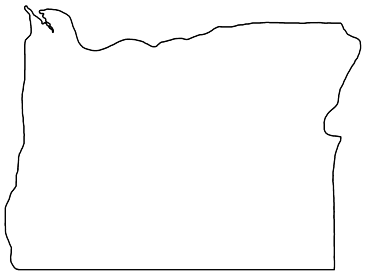
The New Jersey Constitution *may* require revenues from taxes on gasoline and diesel to go to highway purposes. See article 8, section 2:

> There shall be credited to a special account in the General Fund:
>
> (a) for each State fiscal year commencing on and after July 1, 2007 through the State fiscal year commencing on July 1, 2015 an amount equivalent to the revenue derived from $0.105 per gallon from the tax imposed on the sale of motor fuels pursuant to chapter 39 of Title 54 of the Revised Statutes, and for each State fiscal year thereafter, an amount equivalent to all revenue derived from the collection of the tax imposed on the sale of motor fuels pursuant to chapter 39 of Title 54 of the Revised Statutes or any other subsequent law of similar effect;
>
> (b) for the State fiscal year 2001 an amount not less than $100,000,000 derived from the State revenues collected from the tax on the gross receipts of the sale of petroleum products imposed pursuant to P.L.1990, c.42 (C.54:15B-1 et seq.) as amended and supplemented, or any other subsequent law of similar effect, for each State fiscal year from State fiscal year 2002 through State fiscal year 2016 an amount not less than $200,000,000 derived from those revenues, and for each State fiscal year thereafter, an amount equivalent to all revenue derived from the collection of the tax on the gross receipts of the sale of petroleum products imposed pursuant to P.L.1990, c.42 (C.54:15B-1 et seq.) as amended and supplemented, or any other subsequent law of similar effect; and

(c) for the State fiscal year 2002 an amount not less than $80,000,000 from the State revenue collected from the State tax imposed under the "Sales and Use Tax Act," pursuant to P.L.1966, c. 30 (C.54:32B-1 et seq.), as amended and supplemented, or any other subsequent law of similar effect, for the State fiscal year 2003 an amount not less than $140,000,000 from those revenues, and for each State fiscal year thereafter an amount not less than $200,000,000 from those revenues; provided, however, the dedication and use of such revenues as provided in this paragraph shall be subject and subordinate to

(a) all appropriations of revenues from such taxes made by laws enacted on or before December 7, 2006 in accordance with Article VIII, Section II, paragraph 3 of the State Constitution in order to provide the ways and means to pay the principal and interest on bonds of the State presently outstanding or authorized to be issued under such laws or

(b) any other use of those revenues enacted into law on or before December 7, 2006. These amounts shall be appropriated from time to time by the Legislature, only for the purposes of paying or financing the cost of planning, acquisition, engineering, construction, reconstruction, repair and rehabilitation of the transportation system in this State and it shall not be competent for the Legislature to borrow, appropriate or use these amounts or any part thereof for any other purpose, under any pretense whatever.



Oregon

Challenging (Legal)

Summary: Oregon is challenging for legal reasons only.

Oregon is challenging because the state constitution appears to require revenues from taxes on gasoline and diesel (≈55% of emissions) to go to highway purposes. Otherwise Oregon would be promising: grounds for optimism include low industrial and electricity sector emissions, liberal-to-very-liberal citizens and legislature, decent support for climate issues, and active climate organizations. There is a ballot measure option in Oregon.

Emissions

Per-capita emissions in 2014 were 0.6x the U.S. average, with very low industrial sector emissions and extremely low electricity sector emissions (especially impressive given that about 10-15% of power generation is exported).

Tonnes CO2 (2014)	U.S. (per capita)	Oregon (per capita)	Oregon (% of total)
Total	17.0	9.6	100%
Commercial	0.7	0.4	5%
Electric Power	6.3	2.0	21%
Residential	1.1	0.6	7%
Industrial	3.0	1.2	13%
Transportation	5.8	5.3	55%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (342 lbs CO2/MWh) was 0.3x the U.S. average. EIA notes that hydropower accounts for 50-75% of electricity generation and that "one-third of Oregon's total electricity supply is generated at coal-fired power plants, [although] most of that generation occurs out-of-state… Oregon's only coal-fired power plant provides less than 5% of Oregon's in-state net generation, and the plant is scheduled for retirement in 2021."

Climate impacts

Ranked #11 for drought and #8 for inland flooding by States at Risk.

Existing climate policies

EIA has a run-down of various policies. Note that a 2016 law aims to end imported coal by 2030 and sets a Renewable Energy Standard of 50% by 2040.

Carbon pricing activism

(1) Carbon pricing campaigns are being led by Renew Oregon and Our Climate; see also the summary from Climate X-Change's State Carbon Pricing Network. The legislative text of one bill is for a "cap-and-invest" approach, with emission permits distributed free to energy-intensive, trade-exposed businesses and other "leakage risks", permits distributed free to electric utilities and natural gas utilities (with the requirement that they spend the money on bill assistance for low-income residents, bill assistance for certain industrial customers, or "residential or small business climate credits"), and the remaining

permits auctioned off. The legislative text further provides that money from motor vehicle fuels will be allocated to a "Climate Investment Account" inside the State Highway Fund, with the remaining money allocated 85% to an Oregon Climate Investments Fund to reduce greenhouse gases (with at least 50% for "disadvantaged communities" and at least 40%—not necessarily mutually exclusive—for "economically distressed areas") and 15% to a Just Transition Fund for "workers and communities… adversely affected by climate change or climate change policies." (2) Oregon is also ranked as a strong state by one climate-focused group.

Ideology and politics

Citizens are liberal; the legislature is liberal to very liberal. Democrats control the state Senate (17-13), the House (35-25), and the Governor's office. The state has 7 electoral college votes (tied for #27).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Oregon	Rank
Global warming is mostly caused by human activities	53%	54%	18
Worried about global warming	58%	59%	14
Global warming will harm me personally	40%	40%	19
Support regulating CO2 as a pollutant	75%	77%	13
Support carbon tax if refunded (2014)	44%	44%	23
Support or undecided about carbon tax (2014)	75%	75%	23

Source: Yale Climate Opinion Maps

Ballot measures

There were 4 citizen initiatives in 2016. Citizen initiatives go directly to the ballot, either as statute or as constitutional amendments. More here.

Legal note

The Oregon Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 9, section 3a:

(1) Except as provided in subsection (2) of this section, revenue from the following shall be used exclusively for the construction, reconstruction, improvement, repair, maintenance, operation and use of public highways, roads, streets and roadside rest areas in this state:

  (a) Any tax levied on, with respect to, or measured by the storage, withdrawal, use, sale, distribution, importation or receipt of motor vehicle fuel or any other product used for the propulsion of motor vehicles; and

  (b) Any tax or excise levied on the ownership, operation or use of motor vehicles.

(2) Revenues described in subsection (1) of this section:

  (a) May also be used for the cost of administration and any refunds or credits authorized by law.

  (b) May also be used for the retirement of bonds for which such revenues have been pledged.

(c) If from levies under paragraph (b) of subsection (1) of this section on campers, motor homes, travel trailers, snowmobiles, or like vehicles, may also be used for the acquisition, development, maintenance or care of parks or recreation areas.

(d) If from levies under paragraph (b) of subsection (1) of this section on vehicles used or held out for use for commercial purposes, may also be used for enforcement of commercial vehicle weight, size, load, conformation and equipment regulation.

(3) Revenues described in subsection (1) of this section that are generated by taxes or excises imposed by the state shall be generated in a manner that ensures that the share of revenues paid for the use of light vehicles, including cars, and the share of revenues paid for the use of heavy vehicles, including trucks, is fair and proportionate to the costs incurred for the highway system because of each class of vehicle. The Legislative Assembly shall provide for a biennial review and, if necessary, adjustment, of revenue sources to ensure fairness and proportionality."

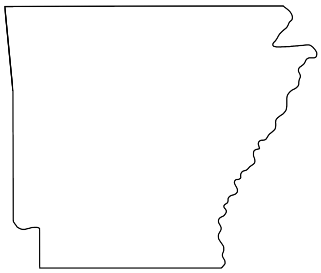
Challenging States For Ideological Reasons

Arkansas

North Carolina

South Carolina

Wisconsin



Arkansas

Challenging (Ideology)

Summary: Arkansas is challenging for ideological reasons.

Arkansas is challenging because citizens and legislators are conservative and are skeptical on climate issues. Absent this concern, Arkansas would have some potential: grounds for optimism include average industrial sector emissions, the possibility that citizens will eventually internalize their personal vulnerability to climate impacts, and the state's ranking as a strong focal-point state by one climate-focused group. On the minus side, Arkansas does have high electricity sector emissions (the cause of which is unclear), and there is a potential legal constraint that needs further investigation. There is a ballot measure option in Arkansas.

Emissions

Per-capita emissions in 2014 were 1.4x the U.S. average, with average industrial sector emissions and high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Arkansas (per capita)	Arkansas (% of total)
Total	17.0	23.3	100%
Commercial	0.7	1.0	4%
Electric Power	6.3	12.0	51%
Residential	1.1	0.8	3%
Industrial	3.0	3.1	13%
Transportation	5.8	6.4	27%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,132 lbs CO2/MWh) was 1.0x the U.S. average. The high per-capita emissions figure for 2014 is something of a mystery, but perhaps it's a combination of factors: about 10-15% of power generation is exported and EIA notes that power prices are very low and that "almost half of the households in the state use electricity as their primary energy source for home heating."

Climate impacts

Ranked #10 for extreme heat, #9 for wildfire, and #3 for inland flooding by States at Risk.

Existing climate policies

EIA describes some modest energy efficiency programs.

Carbon pricing activism

(1) A nascent campaign (led by the Arkansas chapter of Citizens' Climate Lobby) is described by Climate X-Change's State Carbon Pricing Network. (2) Arkansas is also ranked as a strong focal-point state by one climate-focused group.

Ideology and politics

Citizens are very conservative; the legislature is moderate to conservative. Republicans control the state Senate (26-9), the House (76-24), and the Governor's office. The state has 6 electoral college votes (tied for #30).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Arkansas	Rank
Global warming is mostly caused by human activities	53%	47%	44
Worried about global warming	58%	51%	41
Global warming will harm me personally	40%	36%	34
Support regulating CO2 as a pollutant	75%	70%	44
Support carbon tax if refunded (2014)	44%	42%	38
Support or undecided about carbon tax (2014)	75%	76%	13

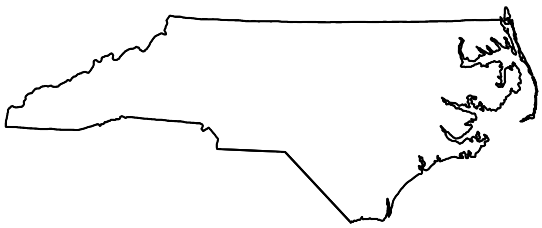
Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there was 1 in 2016, 2 in 2014, and 1 in 2012) go directly to the ballot, either as statute or as constitutional amendments. More here.

Legal note

An Arkansas statute appears to require revenues from some taxes on gasoline and diesel to go to highway purposes. See *statute 26-55-206*: "The tax imposed by this subchapter is levied for the purpose of providing revenue to be used by the State of Arkansas to defray, in whole or in part, the cost of constructing, widening, reconstructing, maintaining, resurfacing, and repairing the public highways, and retiring highway indebtedness of this state." Note that this is a statute, not a constitutional provision, so it does not appear to be a major constraint for carbon tax legislation. Any active campaign in the state, however, would be advised to conduct further research on this issue.



North Carolina

Challenging (Ideology)

Summary: North Carolina is challenging for ideological reasons.

North Carolina is challenging because citizens and legislators are conservative-to-very-conservative and fairly skeptical on climate issues. Absent this concern, North Carolina would be promising: grounds for optimism include very low industrial sector emissions and the state's ranking as a strong focal-point state by one climate-focused group. There is no ballot measure option in North Carolina.

Emissions

Per-capita emissions in 2014 were 0.75x the U.S. average, with extremely low industrial sector emissions and below-average electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	North Carolina (per capita)	North Carolina (% of total)
Total	17.0	12.8	100%
Commercial	0.7	0.5	4%
Electric Power	6.3	5.7	45%
Residential	1.1	0.6	4%
Industrial	3.0	1.0	8%
Transportation	5.8	4.9	38%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (922 lbs CO2/MWh) was 0.8x the U.S. average. Although the per-capita emissions figure for 2014 is below the U.S. average, this figure is for in-state generation only and North Carolina imports 10-15% of its power. EIA also notes that the state gets about one-third of its power from nuclear and that residential consumption is high because of air conditioning usage and because "[a]bout three in five North Carolina households use electricity for home heating."

Climate impacts

Ranked #9 for extreme heat by States at Risk. Also note that there was severe flooding after Hurricane Matthew in October 2016.

Existing climate policies

EIA notes that "In August 2007, North Carolina became the first state in the southeast to adopt a Renewable Energy and Energy Efficiency Portfolio Standard (REPS). The REPS requires investor-owned electric utilities in North Carolina to meet 12.5% of their retail electricity sales through renewable energy resources or energy efficiency measures by 2021."

Carbon pricing activism

Ranked as a strong focal-point state by one climate-focused group, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are conservative; the legislature is conservative to very conservative. Republicans control the state Senate (35-15) and the House (74-46), but Democrats control the Governor's office. The state has 15 electoral college votes (ranked #10).

Percent agreeing, 2016, and rank (out of 51)	U.S.	North Carolina	Rank
Global warming is mostly caused by human activities	53%	52%	25
Worried about global warming	58%	56%	25
Global warming will harm me personally	40%	39%	22
Support regulating CO2 as a pollutant	75%	75%	24
Support carbon tax if refunded (2014)	44%	43%	31
Support or undecided about carbon tax (2014)	75%	75%	22

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in North Carolina.

South Carolina

Challenging (Ideology)

Summary: South Carolina is challenging for ideological reasons.

South Carolina is challenging because citizens and legislators are conservative-to-very-conservative and fairly skeptical on climate issues. Absent this concern, South Carolina would be promising: grounds for optimism include low industrial sector emissions, relatively high support for carbon taxes (45%, ranked #16), and South Carolina's ranking as a strong focal-point state by one climate-focused group. There is no ballot measure option in South Carolina.

Emissions

Per-capita emissions in 2014 were 0.9x the U.S. average, with low industrial sector emissions and average electricity sector emissions. Residential sector emissions were very low.

Tonnes CO2 (2014)	U.S. (per capita)	South Carolina (per capita)	South Carolina (% of total)
Total	17.0	15.5	100%
Commercial	0.7	0.4	2%
Electric Power	6.3	6.7	43%
Residential	1.1	0.4	3%
Industrial	3.0	1.7	11%
Transportation	5.8	6.3	40%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (680 lbs CO2/MWh) was 0.6x the U.S. average. (More than half of net electricity generation is from nuclear, and more reactors are under construction.) The above-average per-capita emissions figure for 2014 is apparently due to power exports and residential consumption. EIA figures show that about 10% of power generation is exported. EIA also notes that "The largest share of retail electricity sales in the state are to the residential sector… because of the high demand for air conditioning… [and] because 7 in 10 South Carolina households use electricity as their primary energy source for home heating."

Climate impacts

Ranked #14 for extreme heat and #5 for coastal flooding by States at Risk.

Existing climate policies

EIA notes that "[i]n 2014, South Carolina's legislature authorized the creation of distributed (customer-sited small-scale) energy resource programs by electric utilities and required the Public Service Commission to develop accompanying net metering rules. The legislation's goal is to encourage the development of in-state renewable energy generation capacity by allowing a participating utility to recover costs connected with meeting the utility's renewable generation target. The program has a target of 2% of aggregate generation capacity from renewable resources by 2021, half from facilities with capacities between 1 and 10 megawatts and half from facilities that have capacities of less than 1 megawatt. Additionally, in 2007, South Carolina established energy standards for public buildings

requiring the development of energy conservation plans. The ultimate conservation goal is a 20% reduction in energy use from year 2000 levels by 2020."

Carbon pricing activism

Ranked as a strong focal-point state by one climate-focused group. Also, South Carolina is the home of one of the nation's most vocal Republican proponents of carbon taxing, RepublicEn.org founder (and former 6-term Congressmember) Bob Inglis. But there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens and the legislature are conservative to very conservative. Republicans control the state Senate (28-18), the House (80-44), and the Governor's office. The state has 9 electoral college votes (tied for #22) and disproportionate impact during Presidential primaries.

Percent agreeing, 2016, and rank (out of 51)	U.S.	South Carolina	Rank
Global warming is mostly caused by human activities	53%	50%	32
Worried about global warming	58%	54%	32
Global warming will harm me personally	40%	37%	27
Support regulating CO2 as a pollutant	75%	72%	34
Support carbon tax if refunded (2014)	44%	45%	16
Support or undecided about carbon tax (2014)	75%	77%	10

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in South Carolina.

Wisconsin

Challenging (Ideology)

Summary: Wisconsin is challenging for ideological reasons.

Wisconsin is challenging because of a moderate-to-very-conservative legislature and citizens who are fairly skeptical on climate issues. Absent this concern, Wisconsin would have some potential: grounds for optimism are that voters are relatively supportive of a carbon tax (46%, ranked #12) and that Wisconsin is ranked #2 in strength by one climate-focused group. There is no ballot measure option in Wisconsin.

Emissions

Per-capita and sectoral emissions in 2014 closely matched the U.S. averages.

Tonnes CO2 (2014)	U.S. (per capita)	Wisconsin (per capita)	Wisconsin (% of total)
Total	17.0	17.6	100%
Commercial	0.7	1.1	6%
Electric Power	6.3	6.9	39%
Residential	1.1	1.8	10%
Industrial	3.0	2.5	14%
Transportation	5.8	5.3	30%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,498 lbs CO2/MWh) was 1.4x the U.S. average. (The per-capita emissions figure for 2014 doesn't entirely reflect that because about 15% of power consumed is imported.) EIA notes that renewable potential is modest except for ethanol and biomass.

Climate impacts

Ranked #8 for drought by States at Risk.

Existing climate policies

EIA notes that "legislation enacted in 2006 set an overall statewide goal of 10% of retail sales from renewable resources."

Carbon pricing activism

Ranked #2 by one carbon pricing group in terms of per-capita strength, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are moderate; the legislature is moderate to very conservative. Republicans control the state Senate (20-13), the House (64-35), and the Governor's office. The state has 10 electoral college votes (tied for #18).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Wisconsin	Rank
Global warming is mostly caused by human activities	53%	53%	24
Worried about global warming	58%	54%	31
Global warming will harm me personally	40%	36%	36
Support regulating CO2 as a pollutant	75%	75%	19
Support carbon tax if refunded (2014)	44%	46%	12
Support or undecided about carbon tax (2014)	75%	74%	36

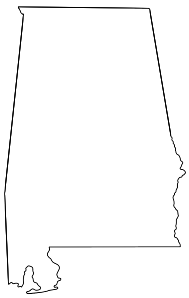
Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Wisconsin.

Very Challenging States (Legal, Ideological and/or Economic)

Alabama
Alaska
Arizona
Georgia
Idaho
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Minnesota
Mississippi
Missouri
Montana
Nebraska
North Dakota
Ohio
Oklahoma
Pennsylvania
South Dakota
Tennessee
Texas
Utah
West Virginia
Wyoming



Alabama

Very Challenging (Legal, Ideology, Economic)

Summary: Alabama is very challenging for legal, ideological and economic reasons.
Alabama is very challenging because industrial and electricity sector emissions are high, citizens and the legislature are conservative and are skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈26% of emissions) to go to highway purposes. Only two states (Alaska and North Dakota) had lower per-capita electricity production from small-scale solar, according to 2016 EIA data. There is no ballot measure option in Alabama.

Emissions

Per-capita emissions in 2014 were 1.5x the U.S. average, with high industrial sector emissions and very high electricity sector emissions (but note that about 35% of power generation is exported). Residential sector emissions were very low, however, presumably because of high penetration of electric heating.

Tonnes CO2 (2014)	U.S. (per capita)	Alabama (per capita)	Alabama (% of total)
Total	17.0	25.4	100%
Commercial	0.7	0.4	2%
Electric Power	6.3	13.4	53%
Residential	1.1	0.5	2%
Industrial	3.0	4.6	18%
Transportation	5.8	6.5	26%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (930 lbs CO2/MWh) was 0.9x the U.S. average. (About 25% of generation is from nuclear and 6% is from hydropower, and natural gas has recently surpassed coal in generation.) The very high per-capita emissions figure for 2014 is due to a combination of power exports and industrial and residential consumption. According to EIA figures, about 35% of power generation is exported, and EIA also notes that the state has a large industrial sector ("automotive, chemical, metals manufacturing, technology, forestry, and aeronautical industries are major contributors to Alabama's economy, as are mining and food production") and that "Average monthly consumption of electricity in Alabama's residential sector is among the highest in the nation because of high demand for air conditioning during the hot summer months and the widespread use of electricity for home heating during the winter months."

Climate impacts

Ranked #7 for extreme heat and #7 for wildfire by States at Risk.

Existing climate policies

EIA notes that Alabama "has adopted a mandatory building energy code for commercial and residential buildings and energy standards for state agencies. The Tennessee Valley Authority, which serves parts of northern Alabama, offers homeowners and businesses financial incentives to install renewable energy

generation. Participating customers receive credit on their utility bills for power sold back to the electric grid."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are very conservative; the legislature is conservative to very conservative. Republicans control the state Senate (26-8), the House (72-32), and the Governor's office. The state has 9 electoral college votes (tied for #22).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Alabama	Rank
Global warming is mostly caused by human activities	53%	48%	42
Worried about global warming	58%	51%	44
Global warming will harm me personally	40%	36%	35
Support regulating CO2 as a pollutant	75%	70%	45
Support carbon tax if refunded (2014)	44%	41%	43
Support or undecided about carbon tax (2014)	75%	74%	27

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Alabama.

Legal note

The Alabama Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See amendment 93: "No moneys derived from any fees, excises, or license taxes, levied by the state, relating to registration, operation, or use of vehicles upon the public highways except a vehicle-use tax imposed in lieu of a sales tax, and no moneys derived from any fee, excises, or license taxes, levied by the state, relating to fuels used for propelling such vehicles except pump taxes, shall be expended for other than cost of administering such laws, statutory refunds and adjustments allowed therein, cost of construction, reconstruction, maintenance and repair of public highways and bridges, costs of highway rights-of-way, payment of highway obligations, the cost of traffic regulation, and the expense of enforcing state traffic and motor vehicle laws. The provisions of this amendment shall not apply to any such fees, excises, or license taxes now levied by the state for school purposes for the whole state or for any county or city board of education therein."

Alaska

Very Challenging (Ideology, Economy)

Summary: Alaska is very challenging for ideological and economic reasons.

Alaska is very challenging because the petroleum industry is extremely powerful politically, industrial sector emissions are very high, and citizens and the legislature are skeptical on climate issues. Grounds for optimism include the liberal/libertarian ideology of citizens, the connection that Alaskans have to the natural environment and the evident changes that global warming is bringing to it as well as to infrastructure, the possibility that the petroleum industry could support a carbon tax, the presence of the Alaska Permanent Fund as a model for a tax-and-dividend approach, and the possibility that everything will be on the table in the budget crunch forced by plummeting oil revenues. There is a ballot measure option in Alaska.

Emissions

Per-capita emissions in 2014 were 2.8x the U.S. average, with extremely high industrial sector emissions (and high emissions in most other sectors) but low electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Alaska (per capita)	Alaska (% of total)
Total	17.0	47.6	100%
Commercial	0.7	3.2	7%
Electric Power	6.3	3.9	8%
Residential	1.1	2.0	4%
Industrial	3.0	22.9	48%
Transportation	5.8	15.6	33%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,287 lbs CO2/MWh) was 1.2x the U.S. average. The reasons for the low per-capita emissions figure for 2014 are unclear, but EIA notes that power for many of the state's rural residents comes from (expensive) diesel generators.

Climate impacts

No top 10 rankings from States at Risk.

Existing climate policies

None.

Carbon pricing activism

See Climate X-Change's State Carbon Pricing Network, which says a listing for a campaign is "coming soon."

Ideology and politics

Citizens are very liberal; the legislature is moderate to conservative. In both cases the liberal leanings are probably due to the state's strong libertarian streak. Republicans control the state Senate (14-6),

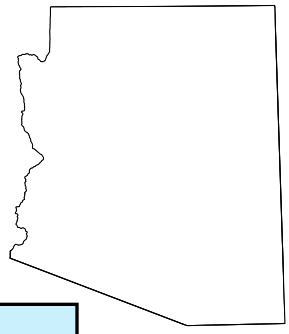
Democrats have "functional control" of the House, and the governor is an Independent. The state has 3 electoral college votes (tied for fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Alaska	Rank
Global warming is mostly caused by human activities	53%	49%	36
Worried about global warming	58%	56%	26
Global warming will harm me personally	40%	37%	29
Support regulating CO2 as a pollutant	75%	73%	29
Support carbon tax if refunded (2014)	44%	41%	42
Support or undecided about carbon tax (2014)	75%	74%	28

Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there was 1 in 2016 and 3 in 2014) are indirect, meaning that after signature-gathering they go to the legislature before a vote of the people. Ballotpedia says that ballot measures may not "dedicate revenues."



Arizona

Very Challenging (Legal, Ideology)

Summary: Arizona is very challenging for legal and ideological reasons.

Arizona is very challenging because electricity sector emissions are high, there is a moderate-to-very-conservative legislature, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈34% of emissions) to go to highway purposes. Grounds for optimism include low industrial sector emissions and a #2 ranking among states for small-scale solar generation per-capita, a factor that could make carbon taxing more palatable. There is a ballot measure option in Arizona.

Emissions

Per-capita emissions in 2014 were 0.8x the U.S. average, with very low industrial sector emissions but high electricity sector emissions (in large part because 25-30% of power generation is exported). Commercial and residential sector emissions were very low.

Tonnes CO2 (2014)	U.S. (per capita)	Arizona (per capita)	Arizona (% of total)
Total	17.0	13.9	100%
Commercial	0.7	0.3	2%
Electric Power	6.3	7.9	57%
Residential	1.1	0.3	2%
Industrial	3.0	0.7	5%
Transportation	5.8	4.7	34%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (976 lbs CO2/MWh) was 0.9x the U.S. average. (EIA notes that coal, nuclear, and natural gas each provide about 30%, with hydropower and solar making up most of the rest.) EIA also notes that "abundant sunshine gives the entire state some of the nation's greatest solar power potential." EIA data also shows that the state ranks #2 among states for small-scale solar generation per-capita, second only to Hawaii, and third in small-scale solar total, behind only California and New Jersey.

Climate impacts

Ranked #16 for extreme heat, #10 for drought, and #3 for wildfire by States at Risk.

Existing climate policies

EIA describes various policies, including a "renewable energy standard [that] requires that increasing amounts of electricity sold in the state must come from renewable sources. The state's overall renewable goal for regulated electric utilities is 15% by 2025."

Carbon pricing activism

Ranked as a potentially strong focal-point state by one climate-focused group, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are moderate; the legislature is moderate to very conservative. Republicans control the state Senate (17-13), the House (35-25), and the Governor's office. The state has 11 electoral college votes (tied for #14).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Arizona	Rank
Global warming is mostly caused by human activities	53%	51%	30
Worried about global warming	58%	56%	22
Global warming will harm me personally	40%	40%	17
Support regulating CO2 as a pollutant	75%	73%	31
Support carbon tax if refunded (2014)	44%	42%	39
Support or undecided about carbon tax (2014)	75%	76%	12

Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there were 2 in 2016, 0 in 2014, and 2 in 2012) go directly to the ballot, either as statute or as constitutional amendments. More here.

Legal note

The Arizona Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 9, section 14: "No moneys derived from fees, excises, or license taxes relating to registration, operation, or use of vehicles on the public highways or streets or to fuels or any other energy source used for the propulsion of vehicles on the public highways or streets, shall be expended for other than highway and street purposes including the cost of administering the state highway system and the laws creating such fees, excises, or license taxes, statutory refunds and adjustments provided by law, payment of principal and interest on highway and street bonds and obligations, expenses of state enforcement of traffic laws and state administration of traffic safety programs, payment of costs of publication and distribution of Arizona highways magazine, state costs of construction, reconstruction, maintenance or repair of public highways, streets or bridges, costs of rights of way acquisitions and expenses related thereto, roadside development, and for distribution to counties, incorporated cities and towns to be used by them solely for highway and street purposes including costs of rights of way acquisitions and expenses related thereto, construction, reconstruction, maintenance, repair, roadside development, of county, city and town roads, streets, and bridges and payment of principal and interest on highway and street bonds."

Georgia

Very Challenging (Legal, Ideology)

Summary: Georgia is very challenging for legal and ideological reasons.

Georgia is very challenging because of a conservative-to-very-conservative legislature and the possibility that the state constitution may require revenues from taxes on gasoline and diesel (≈38% of emissions) to go to highway purposes. Grounds for optimism include very low industrial sector emissions and the hope that citizens will internalize their personal vulnerability to climate impacts. There is no ballot measure option in Georgia.

Emissions

Per-capita emissions in 2014 were 0.8x the U.S. average, with very low industrial sector emissions and average electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Georgia (per capita)	Georgia (% of total)
Total	17.0	13.9	100%
Commercial	0.7	0.4	3%
Electric Power	6.3	5.9	42%
Residential	1.1	0.8	6%
Industrial	3.0	1.5	11%
Transportation	5.8	5.3	38%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,012 lbs CO2/MWh) was 0.9x the U.S. average. The below-average per-capita emissions figure for 2014 is probably due to this below-average emissions rate and also to the fact that about 15% of power consumed is imported. EIA notes that net generation comes mostly from natural gas (about 40%), nuclear (about 25%; two large reactors are under construction but are long delayed), and coal (less than 20% as of 2015). EIA also notes that "offshore waters have large areas with good wind resources in shallow depths close to both land and transmission grid access" and that "[t]here are no wind projects online in Georgia, but several manufacturers located in the state make products for the wind industry."

Climate impacts

Ranked #5 for extreme heat and #6 for inland flooding by States at Risk.

Existing climate policies

EIA notes that Georgia has net metering and some energy standards, and that "state regulators have required Georgia Power to install 525 megawatts of solar photovoltaic (PV) capacity before 2017, including some distributed (small-scale customer-sited) solar capacity." (That figure appears to have been met, based on statewide PV electricity generation data from EIA.)

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are conservative; the legislature is conservative to very conservative. Republicans control the state Senate (38-18), the House (118-62), and the Governor's office. The state has 16 electoral college votes (tied for #8).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Georgia	Rank
Global warming is mostly caused by human activities	53%	51%	31
Worried about global warming	58%	55%	30
Global warming will harm me personally	40%	40%	20
Support regulating CO2 as a pollutant	75%	73%	30
Support carbon tax if refunded (2014)	44%	43%	26
Support or undecided about carbon tax (2014)	75%	76%	14

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Georgia.

Legal note

The Georgia Constitution *may* require revenues from taxes on gasoline and diesel to go to highway purposes. See article 3, section 9, paragraph 6(b): "An amount equal to all money derived from motor fuel taxes received by the state in each of the immediately preceding fiscal years, less the amount of refunds, rebates, and collection costs authorized by law, is hereby appropriated for the fiscal year beginning July 1, of each year following, for all activities incident to providing and maintaining an adequate system of public roads and bridges in this state, as authorized by laws enacted by the General Assembly of Georgia, and for grants to counties by law authorizing road construction and maintenance, as provided by law authorizing such grants."

Idaho

Very Challenging (Legal, Ideology)

Summary: Idaho is very challenging for legal and ideological reasons.

Idaho is very challenging because citizens and the legislature are very conservative and are skeptical on climate issues and because the state constitution appears to require revenues from taxes on gasoline and diesel (≈56% of emissions) to go to highway purposes. Grounds for optimism include low industrial sector emissions and more voter support for carbon taxes than one would expect based on ideology and overall skepticism about climate change. There is a ballot measure option in Idaho, but it has been used very infrequently.

Emissions

Per-capita emissions in 2014 were 0.6x the U.S. average, with low industrial sector emissions and extremely low electricity sector emissions (note that about 40% of power is imported).

Tonnes CO2 (2014)	U.S. (per capita)	Idaho (per capita)	Idaho (% of total)
Total	17.0	10.2	100%
Commercial	0.7	0.7	7%
Electric Power	6.3	0.6	6%
Residential	1.1	1.0	10%
Industrial	3.0	2.2	22%
Transportation	5.8	5.7	56%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (262 lbs CO2/MWh) was 0.2x the U.S. average. The extremely lower per-capita emissions figure for 2014 is partly due to imports (which account for about 40% of power consumption) and partly because hydropower typically accounts for 60-80% of net generation. EIA also notes that Idaho has "substantial hydropower, wind, geothermal, solar, and biomass resources."

Climate impacts

Ranked #7 for drought by States at Risk.

Existing climate policies

None other than a small net metering program.

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens and the legislature are very conservative. Republicans control the state Senate (29-6), the House (59-11), and the Governor's office. The state has 4 electoral college votes (tied for second-fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Idaho	Rank
Global warming is mostly caused by human activities	53%	47%	45
Worried about global warming	58%	52%	39
Global warming will harm me personally	40%	35%	37
Support regulating CO2 as a pollutant	75%	70%	43
Support carbon tax if refunded (2014)	44%	44%	20
Support or undecided about carbon tax (2014)	75%	78%	5

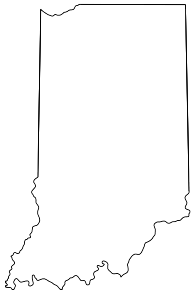
Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there were 0 in 2016, and in fact 0 since at least 2010) go directly to the ballot as statutes. More here.

Legal note

The Idaho Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 7, section 17: "On and after July 1, 1941 the proceeds from the imposition of any tax on gasoline and like motor vehicle fuels sold or used to propel motor vehicles upon the highways of this state and from any tax or fee for the registration of motor vehicles, in excess of the necessary costs of collection and administration and any refund or credits authorized by law, shall be used exclusively for the construction, repair, maintenance and traffic supervision of the public highways of this state and the payment of the interest and principal of obligations incurred for said purposes; and no part of such revenues shall, by transfer of funds or otherwise, be diverted to any other purposes whatsoever."



Indiana

Very Challenging (Legal, Ideology, Economy)

Summary: Indiana is very challenging for legal, ideological and economic reasons.

Indiana is very challenging because industrial and electricity sector emissions are very high, citizens and the legislature are conservative and are skeptical on climate issues, and state law appears to require revenues from taxes on gasoline and diesel (≈21% of emissions) to go to highway purposes. There is no ballot measure option in Indiana.

Emissions

Per-capita emissions in 2014 were 1.9x the U.S. average, with very high industrial sector emissions and very high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Indiana (per capita)	Indiana (% of total)
Total	17.0	31.4	100%
Commercial	0.7	0.9	3%
Electric Power	6.3	15.7	50%
Residential	1.1	1.4	5%
Industrial	3.0	6.8	22%
Transportation	5.8	6.6	21%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,883 lbs CO2/MWh) was 1.7x the U.S. average. The very high per-capita emissions figure for 2014 (especially noteworthy since Indiana imports about 5-10% of its power) is due to a combination of industrial consumption and coal-fired power. EIA notes that "[r]etail sales of electricity to Indiana's industrial sector are among the highest in the nation" and that "More than three-fourths of Indiana's electricity generation is typically fueled by coal." (According to data in EIA's *Electric Power Monthly* reports, Indiana generates more electricity from coal than any other state, except for Texas.) On the plus side, EIA also notes that "Indiana's open farmland has substantial wind energy potential" and that wind "provides a small but increasing share" of electricity.

Climate impacts

Ranked #22 for extreme heat by States at Risk.

Existing climate policies

EIA notes that "in 2011, Indiana's legislature created a voluntary clean energy portfolio standard that took effect on January 1, 2012. As an incentive, regulated electric utilities and retail power suppliers are eligible for increases in their allowable profit if they obtain increasing amounts of their electricity supply from clean energy in each of three goal periods. The ultimate goal is for suppliers to obtain 10% of their electricity from clean energy sources in 2025."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are very conservative; the legislature is conservative to very conservative. Republicans control the state Senate (41-9), the House (70-30), and the Governor's office. The state has 11 electoral college votes (tied for #14).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Indiana	Rank
Global warming is mostly caused by human activities	53%	49%	37
Worried about global warming	58%	49%	46
Global warming will harm me personally	40%	34%	42
Support regulating CO2 as a pollutant	75%	71%	39
Support carbon tax if refunded (2014)	44%	42%	40
Support or undecided about carbon tax (2014)	75%	71%	46

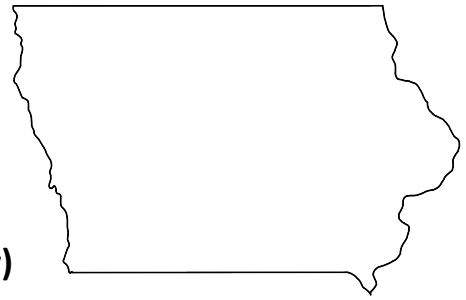
Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Indiana.

Legal note

An Indiana statute appears to require revenues from certain taxes on gasoline and diesel to go to highway purposes. See statute 6-6.1.1-801.5, which allocates "the taxes that are collected under this chapter." (See more here.)



Iowa

Very Challenging (Legal, Ideology, Economy)

Summary: Iowa is very challenging for legal, ideological and economic reasons.

Iowa is very challenging because industrial and electricity sector emissions are high, citizens are conservative and are skeptical on climate issues (especially on whether they are personally vulnerable), and the state constitution appears to require revenues from taxes on gasoline and diesel (≈26% of emissions) to go to highway purposes. Grounds for optimism include Iowa's significant wind sector (30% of net generation, and the highest per capita wind electricity generation of any state), its ranking as a strong focal-point state by one climate-focused group, and the fact that voters seem relatively open to the idea of a carbon tax (ranked #14, with 45% support compared to the U.S. average of 44%). There is no ballot measure option in Iowa.

Emissions

Per-capita emissions in 2014 were 1.6x the U.S. average, with very high industrial sector emissions and high electricity sector emissions, despite Iowa's robust wind-electricity sector. There were also very high commercial sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Iowa (per capita)	Iowa (% of total)
Total	17.0	26.4	100%
Commercial	0.7	1.5	6%
Electric Power	6.3	10.4	40%
Residential	1.1	1.6	6%
Industrial	3.0	6.1	23%
Transportation	5.8	6.7	26%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,361 lbs CO2/MWh) was 1.2x the U.S. average. The high per-capita emissions figure for 2014 is due to a combination of power exports, industrial consumption, and coal-fired power. EIA figures show that about 7% of power generation is exported. EIA also notes that the state has a prominent industrial sector: "Agriculture, biofuels production, and manufacturing are key Iowa industries." Coal accounts for more than half of the net electricity generated. On the plus side, EIA also notes that wind "accounts for about three-tenths of Iowa's net generation."

Climate impacts

No top rankings from States at Risk.

Existing climate policies

EIA notes that "Iowa's energy policies and regulations promote energy efficiency and renewable resources. In 1983, Iowa became the first state in the nation to adopt a renewable portfolio standard (RPS). State regulations required Iowa's two investor-owned utilities to own or to contract for a combined total of 105 megawatts of renewable generating capacity and associated production from generating facilities designated by the utilities and approved by the Iowa Utilities Board (IUB). Installed

capacity from eligible renewable resources has exceeded the RPS goals. In 2008, the IUB, at the direction of the state legislature, established energy efficiency standards for each regulated utility in the state. Municipal utilities and cooperatives file their own energy efficiency goals. In addition to energy efficiency standards, the Mandatory Utility Green Power Option requires all electric utilities operating in Iowa, including those not rate-regulated by the IUB, to offer renewable-sourced power options to their customers."

Carbon pricing activism

Ranked as a strong focal-point state by one climate-focused group, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are conservative; the legislature is moderate. Republicans control the state Senate (29-20, with 1 Independent), the House (59-41), and the Governor's office. The state has 6 electoral college votes (tied for #30) and disproportionate impact during Presidential primaries.

Percent agreeing, 2016, and rank (out of 51)	U.S.	Iowa	Rank
Global warming is mostly caused by human activities	53%	52%	28
Worried about global warming	58%	55%	29
Global warming will harm me personally	40%	33%	45
Support regulating CO2 as a pollutant	75%	74%	27
Support carbon tax if refunded (2014)	44%	45%	14
Support or undecided about carbon tax (2014)	75%	74%	31

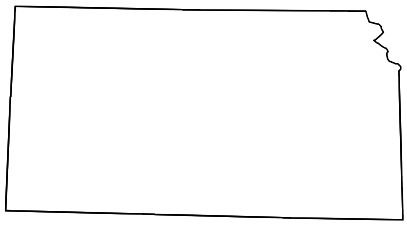
Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Iowa.

Legal note

The Iowa Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 7, section 8: "All motor vehicle registration fees and all licenses and excise taxes on motor vehicle fuel, except cost of administration, shall be used exclusively for the construction, maintenance and supervision of the public highways exclusively within the state or for the payment of bonds issued or to be issued for the construction of such public highways and the payment of interest on such bonds."



Kansas

Very Challenging (Legal, Ideology, Economy)

Summary: Kansas is very challenging for legal, ideological and economic reasons.

Kansas is very challenging because industrial and electricity sector emissions are high, citizens and the legislature are conservative and are skeptical on climate issues, and the state constitution may require revenues from taxes on gasoline and diesel (≈29% of emissions) to go to highway purposes. There is no ballot measure option in Kansas.

Emissions

Per-capita emissions in 2014 were 1.4x the U.S. average, with high industrial sector emissions and high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Kansas (per capita)	Kansas (% of total)
Total	17.0	24.1	100%
Commercial	0.7	0.8	3%
Electric Power	6.3	10.6	44%
Residential	1.1	1.5	6%
Industrial	3.0	4.2	17%
Transportation	5.8	7.0	29%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,321 lbs CO2/MWh) was 1.2x the U.S. average. The high per-capita emissions figure for 2014 is due to a combination of power exports, industrial consumption, and coal-fired power. EIA figures show that about 10% of power generation is exported. EIA also notes that the industrial sector "includes manufacturing, particularly aviation and aerospace manufacturing, as well as agriculture and the energy-intensive petroleum industry" and that "[c]oal-fired power plants supply more than half of the net electricity generated in Kansas." On the plus side, EIA also notes that Kansas has "significant" wind and solar resources, and that "[i]n 2015, wind was the second largest source of net generation, producing nearly one-fourth of the electricity generated in Kansas."

Climate impacts

No top rankings from States at Risk.

Existing climate policies

EIA notes that there is a modest net metering program, and also that "[i]n 2015, the Kansas legislature converted the state's renewable portfolio standard (RPS), enacted in May 2009, into a voluntary goal for the state's investor-owned and cooperative electric utilities."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens and the legislature are very conservative. Republicans control the state Senate (31-9), the House (85-40), and the Governor's office. The state has 6 electoral college votes (tied for #30).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Kansas	Rank
Global warming is mostly caused by human activities	53%	48%	39
Worried about global warming	58%	52%	40
Global warming will harm me personally	40%	35%	41
Support regulating CO2 as a pollutant	75%	70%	42
Support carbon tax if refunded (2014)	44%	43%	27
Support or undecided about carbon tax (2014)	75%	74%	32

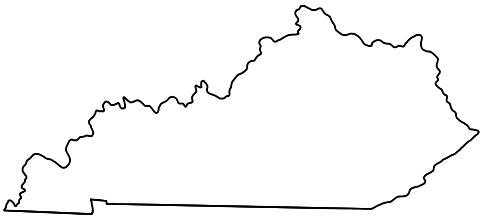
Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Kansas.

Legal note

The Kansas Constitution may require revenues from taxes on gasoline and diesel to go to highway purposes. See article 11, section 10: "The state shall have power to levy special taxes, for road and highway purposes, on motor vehicles and on motor fuels." This language is not very strong and may not be a major constraint on carbon tax legislation. Any active campaign in the state, however, would be advised to conduct further research on this issue.



Kentucky

Very Challenging (Legal, Ideology, Economy)

Summary: Kentucky is very challenging for legal, ideological and economic reasons.
In addition to its prominent coal industry, industrial and electricity sector emissions are high, citizens and the legislature are conservative and are skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈22% of emissions) to go to highway purposes. There is no ballot measure option in Kentucky. What modest potential there is stems from Kentucky's vulnerability to extreme heat and flooding and from the surprisingly liberal rankings of the state legislature on ideological measures.

Emissions

Per-capita emissions in 2014 were 1.9x the U.S. average, with high industrial sector emissions and extremely high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Kentucky (per capita)	Kentucky (% of total)
Total	17.0	31.6	100%
Commercial	0.7	0.6	2%
Electric Power	6.3	19.6	62%
Residential	1.1	0.8	3%
Industrial	3.0	3.6	11%
Transportation	5.8	7.0	22%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (2,013 lbs CO2/MWh) was 1.8x the U.S. average. EIA notes that natural gas generation is growing but that coal accounts for almost 90% of generation. EIA also notes that Kentucky has a large manufacturing sector ("motor vehicles, food, beverage and tobacco products, and chemicals") and that "[a]bout half of Kentucky households use electricity as their primary heating source."

Climate impacts

Ranked #11 for extreme heat and #9 for inland flooding by States at Risk

Existing climate policies

EIA notes that "Kentucky law provides for net metering of distributed generation from solar, wind, hydro, biomass, and biogas facilities of 30 kilowatts or less. Each power provider's obligation to connect eligible customer generators is limited to 1% of the provider's peak load in the previous year."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are conservative; the legislature is liberal to moderate. Republicans control the state Senate (27-11), the House (64-36), and the Governor's office. The state has 8 electoral college votes (tied for #25).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Kentucky	Rank
Global warming is mostly caused by human activities	53%	46%	47
Worried about global warming	58%	48%	48
Global warming will harm me personally	40%	34%	44
Support regulating CO2 as a pollutant	75%	70%	46
Support carbon tax if refunded (2014)	44%	40%	47
Support or undecided about carbon tax (2014)	75%	72%	42

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Kentucky.

Legal note

The Kentucky Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See section 230: "No money shall be drawn from the State Treasury, except in pursuance of appropriations made by law; and a regular statement and account of the receipts and expenditures of all public money shall be published annually. No money derived from excise or license taxation relating to gasoline and other motor fuels, and no moneys derived from fees, excise or license taxation relating to registration, operation, or use of vehicles on public highways shall be expended for other than the cost of administration, statutory refunds and adjustments, payment of highway obligations, costs for construction, reconstruction, rights-of-way, maintenance and repair of public highways and bridges, and expense of enforcing state traffic and motor vehicle laws."

Louisiana

Very Challenging (Ideology, Economy)

Summary: Louisiana is very challenging for ideological and economic reasons.

Industrial and electricity sector emissions are high, and citizens and the legislature are conservative and are very skeptical on climate issues. The only grounds for optimism is the possibility that citizens may eventually internalize their personal vulnerability to climate impacts, particularly in the wake of Hurricane Katrina. There is no ballot measure option in Louisiana.

Emissions

Per-capita emissions in 2014 were 2.8x the U.S. average, with extremely high industrial sector emissions and high electricity sector emissions. Residential sector emissions were very low.

Tonnes CO2 (2014)	U.S. (per capita)	Louisiana (per capita)	Louisiana (% of total)
Total	17.0	47.0	100%
Commercial	0.7	0.4	1%
Electric Power	6.3	8.4	18%
Residential	1.1	0.5	1%
Industrial	3.0	28.1	60%
Transportation	5.8	9.5	20%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,149 lbs CO2/MWh) was 1.1x the U.S. average. Although the per-capita emissions figure for 2014 is only modestly higher than the U.S. average, this figure is for in-state generation only; imports amount to about 10% of power consumption. EIA notes that Louisiana has an "industrial sector dominated by the energy-intensive chemical, petroleum, and natural gas industries" and that "three-fifths of all households use electricity for home heating and almost all households have air conditioning."

Climate impacts

Ranked #6 for extreme heat, #8 for wildfire, and #2 for coastal flooding by States at Risk.

Existing climate policies

EIA notes: "The Louisiana Public Service Commission initiated a renewable energy pilot program in 2010 to determine whether a renewable portfolio standard (RPS) was suitable for the state. In 2013, the commission concluded that Louisiana did not need a mandatory RPS. Louisiana has other policies designed to encourage renewable energy and energy efficiency, including voluntary electric utility efficiency programs, energy standards for public buildings, and net metering. Distributed installations of up to 25 kilowatts using solar PV, wind, biomass, and other renewable technologies are eligible for utility net metering, but total consumer capacity connected to the system is limited to 0.5% of each utility's load. Because customer demand for distributed connections has exceeded that limit, the state is considering how to accommodate additional distributed facilities."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens and the legislature are conservative. Republicans control the state Senate (25-14) and House (60-42, with 3 Independents), but Democrats control the Governor's office. Hurricane Katrina does not appear to have significantly influenced opinions about global warming. The state has 8 electoral college votes (tied for #25).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Louisiana	Rank
Global warming is mostly caused by human activities	53%	49%	38
Worried about global warming	58%	53%	34
Global warming will harm me personally	40%	37%	28
Support regulating CO2 as a pollutant	75%	71%	38
Support carbon tax if refunded (2014)	44%	41%	44
Support or undecided about carbon tax (2014)	75%	74%	33

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Louisiana.

Maine

Very Challenging (Legal, Ideology)

Summary: Maine is very challenging for legal and ideological reasons.

Maine is very challenging, in part because voters are decidedly average on most climate issues and demonstrate a dislike for carbon taxes that affects some New England states. Another challenge is the state constitution, which appears to require revenues from taxes on gasoline and diesel (≈53% of emissions) to go to highway purpose. Grounds for optimism include very low industrial and electricity sector emissions and the generally liberal views of citizens and the legislature. There is a ballot measure option in Maine. Note that Maine is a member of RGGI, the electricity sector cap-and-trade program that covers nine northeast states.

Emissions

Per-capita emissions in 2014 were 0.7x the U.S. average, with very low industrial sector emissions and extremely low electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Maine (per capita)	Maine (% of total)
Total	17.0	12.5	100%
Commercial	0.7	1.3	10%
Electric Power	6.3	1.3	10%
Residential	1.1	1.9	15%
Industrial	3.0	1.5	12%
Transportation	5.8	6.6	53%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (554 lbs CO2/MWh) was 0.5x the U.S. average. The extremely low per-capita emissions figure for 2014 is mostly due to high use of renewables: EIA notes that "[i]n 2015, two-thirds of Maine's net electricity generation came from renewable sources, primarily hydroelectric dams and biomass generators using wood waste products, and another one-fourth was generated by natural gas. The rest of Maine's net generation comes from wind and petroleum, with less than 1% produced by coal and solar power." (Also, about 15% of power consumed is imported.)

Climate impacts

Ranked #4 for inland flooding by States at Risk.

Existing climate policies

There are a variety of programs (described by EIA) as well as the RGGI cap-and-trade system covering electricity sector.

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are ranked as very liberal and the legislature as liberal, but Republicans control the state Senate

(18-17) and the Governor's office; Democrats control the House (77-72, with 2 Independents). The state has 4 electoral college votes (tied for second-fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Maine	Rank
Global warming is mostly caused by human activities	53%	53%	23
Worried about global warming	58%	56%	23
Global warming will harm me personally	40%	37%	30
Support regulating CO2 as a pollutant	75%	76%	15
Support carbon tax if refunded (2014)	44%	39%	49
Support or undecided about carbon tax (2014)	75%	69%	50

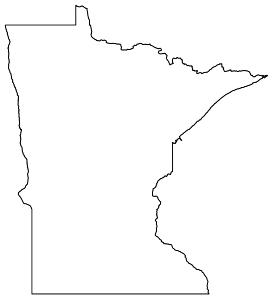
Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there were 5 in 2016 alone) are indirect, meaning that after signature-gathering they go to the legislature, which can either approve them or put them to a vote of the people. More here.

Legal note

The Maine Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 9, section 19: "All revenues derived from fees, excises and license taxes relating to registration, operation and use of vehicles on public highways, and to fuels used for propulsion of such vehicles shall be expended solely for cost of administration, statutory refunds and adjustments, payment of debts and liabilities incurred in construction and reconstruction of highways and bridges, the cost of construction, reconstruction, maintenance and repair of public highways and bridges under the direction and supervision of a state department having jurisdiction over such highways and bridges and expense for state enforcement of traffic laws and shall not be diverted for any purpose, provided that these limitations shall not apply to revenue from an excise tax on motor vehicles imposed in lieu of personal property tax."



Minnesota

Very Challenging (Legal, Economy)

Summary: Minnesota is very challenging for legal and economic reasons.

Minnesota is very challenging because industrial sector emissions are above average, voters seem to have internalized that they are not personally very vulnerable to climate impacts, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈32% of emissions) to go to highway purposes. Grounds for optimism include a generally liberal citizenry and legislature and the state's ranking as a strong focal-point state by one climate-focused group. There is no ballot measure option in Minnesota.

Emissions

Per-capita and sectoral emissions in 2014 fairly closely matched the U.S. average, with above-average industrial sector emissions and below-average electricity sector emissions (note that about 25% of power consumed is imported).

Tonnes CO2 (2014)	U.S. (per capita)	Minnesota (per capita)	Minnesota (% of total)
Total	17.0	17.4	100%
Commercial	0.7	1.3	7%
Electric Power	6.3	5.3	31%
Residential	1.1	1.8	10%
Industrial	3.0	3.5	20%
Transportation	5.8	5.5	32%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,170 lbs CO2/MWh) was 1.1x the U.S. average. The below-average per-capita emissions figure for 2014 should come with the caveat that this figure is for in-state generation only and that about 25% of power consumed is imported from other states and from Canada. EIA also notes that the industrial sector "includes the energy-intensive petroleum refining and food processing industries", that Minnesota "has significant renewable resources, including energy from winds that blow unobstructed across the state's open prairies", and that coal and nuclear provide more than 40% and more than 20% of power generation, respectively.

Climate impacts

Ranked #5 for drought by States at Risk.

Existing climate policies

EIA notes that "Minnesota has a renewable energy standard that applies to all electricity providers in the state. It requires that at least 25% of the providers' retail electricity sales be obtained from eligible renewable sources by 2025."

Carbon pricing activism

(1) Ranked as a strong focal-point state by one climate-focused group. (2) Climate X-Change's State Carbon Pricing Network says a listing for a campaign is "coming soon."

Ideology and politics

Citizens and the legislature are ranked as liberal, but Republicans control the state Senate (34-33) and House (77-57); Democrats control the Governor's office. The state has 10 electoral college votes (tied for #18).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Minnesota	Rank
Global warming is mostly caused by human activities	53%	52%	26
Worried about global warming	58%	56%	28
Global warming will harm me personally	40%	35%	39
Support regulating CO2 as a pollutant	75%	75%	21
Support carbon tax if refunded (2014)	44%	43%	29
Support or undecided about carbon tax (2014)	75%	72%	43

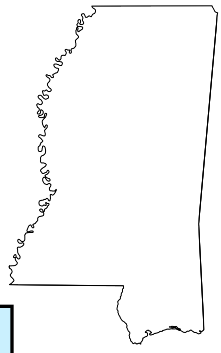
Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Minnesota.

Legal note

The Minnesota Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 14, section 10: "The legislature may levy an excise tax on any means or substance used for propelling vehicles on the public highways of this state or on the business of selling it. The proceeds of the tax shall be paid into the highway user tax distribution fund."



Mississippi

Very Challenging (Legal, Ideology, Economy)

Summary: Mississippi is very challenging for legal, ideological and economic reasons.
Mississippi is very challenging because industrial and electricity sector emissions are high, citizens and the legislature are moderate to conservative and are mostly skeptical on climate issues, and state law may require revenues from taxes on gasoline and diesel (≈40% of emissions) to go to highway purposes. There is a ballot measure option in Mississippi but it has been used infrequently.

Emissions

Per-capita emissions in 2014 were 1.3x the U.S. average, with high industrial sector emissions and high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Mississippi (per capita)	Mississippi (% of total)
Total	17.0	21.4	100%
Commercial	0.7	0.6	3%
Electric Power	6.3	7.9	37%
Residential	1.1	0.7	3%
Industrial	3.0	3.7	17%
Transportation	5.8	8.6	40%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (855 lbs CO2/MWh) was 0.8x the U.S. average. The high per-capita emissions figure for 2014 appears to be driven mostly by residential consumption. EIA notes that "Air-conditioning use during the hot summer months and the widespread use of electricity for home heating during the mild winter months drives strong demand for electricity in Mississippi households. More than half of Mississippi's households use electricity for home heating." EIA also notes that a new coal-fired power plant was scheduled to begin operation in 2016 with "a state-of-the-art coal gasification process designed to reduce carbon emissions," but the project has suffered extreme delays and overruns and its future is uncertain, according to a 2016 *NY Times* feature story.

Climate impacts

Ranked #4 for extreme heat and #6 for wildfire by States at Risk.

Existing climate policies

None.

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are moderate; the legislature is moderate to conservative. Republicans control the state Senate (32-20), the House (74-48), and the Governor's office. The state has 6 electoral college votes (tied for #30).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Mississippi	Rank
Global warming is mostly caused by human activities	53%	50%	33
Worried about global warming	58%	54%	33
Global warming will harm me personally	40%	38%	24
Support regulating CO2 as a pollutant	75%	72%	35
Support carbon tax if refunded (2014)	44%	44%	21
Support or undecided about carbon tax (2014)	75%	78%	7

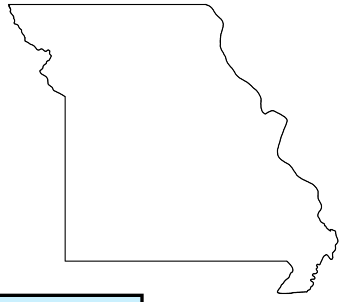
Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there were 0 in 2016, 1 in 2015, 0 in 2014 and 2012, and 3 in 2011) go directly to the ballot as constitutional amendments. More here.

Legal note

A Mississippi statute *may* require revenues from taxes on gasoline and diesel to go to highway purposes. See statute 27-55-3: "It is declared to be the purpose and intention of the legislature to impose an excise tax to provide highways, streets, and roads…"



Missouri

Very Challenging (Legal, Ideology)

Summary: Missouri is very challenging for legal and ideological economic reasons.

Missouri is very challenging because electricity sector emissions are high, citizens lean conservative and are fairly skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈29% of emissions) to go to highway purposes. Grounds for optimism include low industrial sector emissions and a legislature that is ranked moderate-to-liberal overall. There is a ballot measure option in Missouri.

Emissions

Per-capita emissions in 2014 were 1.3x the U.S. average, with very low industrial sector emissions and high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Missouri (per capita)	Missouri (% of total)
Total	17.0	21.8	100%
Commercial	0.7	0.8	4%
Electric Power	6.3	12.1	55%
Residential	1.1	1.2	5%
Industrial	3.0	1.5	7%
Transportation	5.8	6.2	29%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,788 lbs CO2/MWh) was 1.6x the U.S. average. The high per-capita emissions figure for 2014 appears to be driven mostly by the fact that coal "fuels almost four-fifths of Missouri's net electricity generation." Moreover, "one-third of households in Missouri rely on electricity as their primary energy source for home heating."

Climate impacts

Ranked #17 for extreme heat and #10 for inland flooding by States at Risk.

Existing climate policies

EIA notes that "Missouri adopted a mandatory renewable energy standard in 2008. The standard requires investor-owned electric utilities to increase the percentage of electricity sales from renewable resources incrementally up to a minimum of 15% of total sales by 2021. The standard also requires increases in the contribution from solar energy up to a minimum of 0.3% of total retail electricity sales by 2021."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are moderate to conservative; the legislature is moderate to liberal. Republicans control the state Senate (25-9), the House (117-46), and the Governor's office. The state has 10 electoral college votes (tied for #18).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Missouri	Rank
Global warming is mostly caused by human activities	53%	49%	34
Worried about global warming	58%	53%	37
Global warming will harm me personally	40%	36%	33
Support regulating CO2 as a pollutant	75%	72%	32
Support carbon tax if refunded (2014)	44%	43%	30
Support or undecided about carbon tax (2014)	75%	74%	35

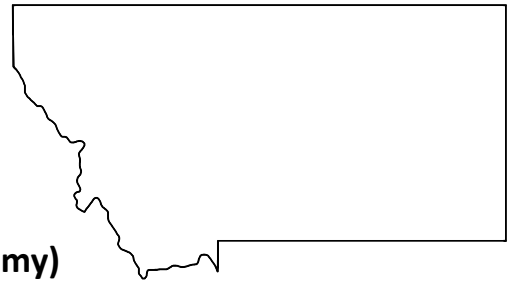
Source: Yale Climate Opinion Maps

Ballot measures

Citizen initiatives (there were 4 in 2016) go directly to the ballot, either as statute or as constitutional amendments. More here.

Legal note

The Missouri Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 4, section 30(b)(1): "For the purpose of constructing and maintaining an adequate system of connected state highways all state revenue derived from highway users as an incident to their use or right to use the highways of the state, including all state license fees and taxes upon motor vehicles, trailers and motor vehicle fuels, and upon, with respect to, or on the privilege of the manufacture, receipt, storage, distribution, sale or use thereof (excepting those portions of the sales tax on motor vehicles and trailers which are not distributed to the state road fund pursuant to subsection 2 of this section 30(b) and further excepting all property taxes), less the (1) actual cost of collection of the department of revenue (but not to exceed three percent of the particular tax or fee collected), (2) actual cost of refunds for overpayments and erroneous payments of such taxes and fees and maintaining retirement programs as permitted by law and (3) actual cost of the state highway patrol in administering and enforcing any state motor vehicle laws and traffic regulations, shall be deposited in the state road fund which is hereby created within the state treasury and stand appropriated without legislative action to be used and expended by the highways and transportation commission for the following purposes, and no other…"



Montana

Very Challenging (Legal, Ideology, Economy)

Summary: Montana is very challenging for legal, ideological and economic reasons.

Montana is very challenging because industrial and electricity sector emissions are high, citizens are fairly skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈24% of emissions) to go to highway purposes. Grounds for optimism include the grassroots strength of one climate-focused group and the relatively high level of voter support for carbon taxes (45%, ranked #15). There is a ballot measure option in Montana.

Emissions

Per-capita emissions in 2014 were 1.9x the U.S. average, with high industrial sector emissions and very high electricity sector emissions (note that about 50% of power generation is exported).

Tonnes CO2 (2014)	U.S. (per capita)	Montana (per capita)	Montana (% of total)
Total	17.0	31.6	100%
Commercial	0.7	1.3	4%
Electric Power	6.3	16.7	53%
Residential	1.1	1.6	5%
Industrial	3.0	4.4	14%
Transportation	5.8	7.6	24%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,362 lbs CO2/MWh) was 1.2x the U.S. average. The very high per-capita emissions figure for 2014 is mostly due to power exports: according to EIA figures, about 50% of power generation is exported. EIA also notes that power generation is roughly split between coal and hydropower, and that Montana has "some of the best wind potential in the nation".

Climate impacts

Ranked #2 for drought by States at Risk.

Existing climate policies

EIA notes that "Montana's renewable resource standard (RRS) requires retail electricity suppliers to get at least 15% of the electricity they sell in-state from renewable energy sources beginning in 2015."

Carbon pricing activism

Ranked #9 by one carbon pricing group in terms of per-capita strength, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens and the legislature are moderate. Republicans control the state Senate (32-18) and House (59-41), but Democrats control the Governor's office. The state has 3 electoral college votes (tied for fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Montana	Rank
Global warming is mostly caused by human activities	53%	48%	41
Worried about global warming	58%	53%	38
Global warming will harm me personally	40%	32%	48
Support regulating CO2 as a pollutant	75%	72%	33
Support carbon tax if refunded (2014)	44%	45%	15
Support or undecided about carbon tax (2014)	75%	75%	20

Source: Yale Climate Opinion Maps

Ballot measures

There were 4 citizen initiatives in 2016. Citizen initiatives go directly to the ballot, either as statute or as constitutional amendments. More here from Ballotpedia, which notes that "Initiated laws may not make appropriations".

Legal note

The Montana Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 8, section 6:

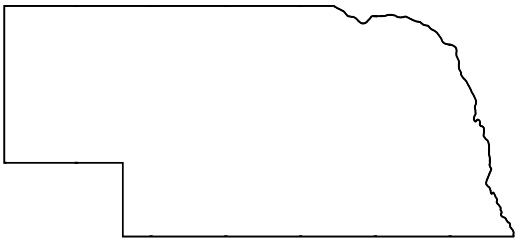
(1) Revenue from gross vehicle weight fees and excise and license taxes (except general sales and use taxes) on gasoline, fuel, and other energy sources used to propel vehicles on public highways shall be used as authorized by the legislature, after deduction of statutory refunds and adjustments, solely for:

  (a) Payment of obligations incurred for construction, reconstruction, repair, operation, and maintenance of public highways, streets, roads, and bridges.

  (b) Payment of county, city, and town obligations on streets, roads, and bridges.

  (c) Enforcement of highway safety, driver education, tourist promotion, and administrative collection costs.

(2) Such revenue may be appropriated for other purposes by a three-fifths vote of the members of each house of the legislature."



Nebraska

Very Challenging (Ideology, Economy)

Summary: Wisconsin is very challenging for ideological and economic reasons.

Nebraska is very challenging because industrial and electricity sector emissions are high and because citizens and the legislature are conservative-to-very-conservative and are skeptical on climate issues. One bright spot is that the state is ranked as a strong state by one climate-focused group. There is a ballot measure option in Nebraska, but it has been used infrequently.

Emissions

Per-capita emissions in 2014 were 1.6x the U.S. average, with high industrial sector emissions and very high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Nebraska (per capita)	Nebraska (% of total)
Total	17.0	27.7	100%
Commercial	0.7	1.1	4%
Electric Power	6.3	12.9	47%
Residential	1.1	1.5	5%
Industrial	3.0	4.9	18%
Transportation	5.8	7.4	27%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,397 lbs CO2/MWh) was 1.3x the U.S. average. The very high per-capita emissions figure for 2014 is due to a combination of power exports, industrial consumption, and coal-fired power. According to EIA figures, about 15% of power generation is exported. EIA also notes that coal-fired power plants "typically supply about three-fifths of Nebraska's net electricity generation" and that "Nebraska is one of the world's major meatpacking centers, and the energy-intensive food processing industry leads the state's manufacturing sector. Other major energy-intensive industries in the state include chemical manufacturing—particularly of pharmaceuticals, pesticides, and fertilizers—and machinery manufacturing and agriculture." On the plus side, EIA also notes that Nebraska has "considerable renewable resources", including "some of the nation's best wind energy resources".

Climate impacts

No top rankings from States at Risk.

Existing climate policies

EIA notes that Nebraska has "a number of renewable energy tax credits, as well as interconnection and net metering rules for distributed (customer-sited, small-scale)… power generation. Net metered connections are limited to 1% of each utility's average monthly peak demand. Nebraska also has a statewide building energy code."

Carbon pricing activism

Ranked as a strong state by one climate-focused group, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

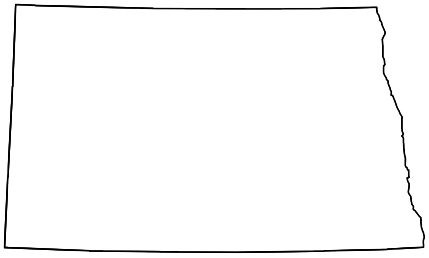
Citizens are very conservative; the legislature is conservative. The unicameral legislature is non-partisan; Republicans control the Governor's office. The state has 5 electoral college votes (tied for #36).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Nebraska	Rank
Global warming is mostly caused by human activities	53%	48%	43
Worried about global warming	58%	51%	43
Global warming will harm me personally	40%	33%	47
Support regulating CO2 as a pollutant	75%	70%	40
Support carbon tax if refunded (2014)	44%	43%	32
Support or undecided about carbon tax (2014)	75%	75%	21

Source: Yale Climate Opinion Maps

Ballot measures

There were 0 citizen initiatives in 2016 (and 1 in 2014 and 0 in 2012 and 2010). Citizen initiatives go directly to the ballot, either as statute or as constitutional amendments. More here.



North Dakota

Very Challenging (Legal, Ideology, Economy)

Summary: North Dakota is very challenging for legal, ideological and economic reasons.
North Dakota is very challenging because industrial and electricity sector emissions are extremely high, citizens and the legislature are conservative and are skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈17% of emissions) to go to highway purposes. The state ranked second to last in small-scale solar generation, both total and per capita (ahead of only Alaska on both scores). There is a ballot measure option in North Dakota.

Emissions

Per-capita emissions in 2014 were 4.7x the U.S. average, with extremely high industrial sector emissions and extremely high electricity sector emissions. There were also very high commercial and transportation sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	North Dakota (per capita)	North Dakota (% of total)
Total	17.0	79.1	100%
Commercial	0.7	2.0	3%
Electric Power	6.3	39.0	49%
Residential	1.1	1.5	2%
Industrial	3.0	23.2	29%
Transportation	5.8	13.4	17%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,850 lbs CO2/MWh) was 1.7x the U.S. average. The extremely high per-capita emissions figure for 2014 is due to a combination of power exports, industrial consumption, and coal-fired power. According to EIA figures, about 50% of power generation is exported. EIA also notes that coal-fired power plants "provide three-fourths of North Dakota's electricity generation" despite the state's "abundant renewable resources" including "substantial undeveloped wind energy potential".

Climate impacts

No top rankings from States at Risk.

Existing climate policies

None.

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens and the legislature are moderate to conservative. Republicans control the state Senate (38-9), the state House (81-13), and the Governor's office. The state has 3 electoral college votes (tied for fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	North Dakota	Rank
Global warming is mostly caused by human activities	53%	46%	48
Worried about global warming	58%	48%	47
Global warming will harm me personally	40%	28%	51
Support regulating CO2 as a pollutant	75%	69%	47
Support carbon tax if refunded (2014)	44%	42%	41
Support or undecided about carbon tax (2014)	75%	69%	51

Source: Yale Climate Opinion Maps

Ballot measures

There were 3 citizen initiatives in 2016. Citizen initiatives go directly to the ballot, either as statute or as constitutional amendments. More here from Ballotpedia, which notes that initiatives cannot appropriate funds.

Legal note

The North Dakota Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 10, section 11: "Revenue from gasoline and other motor fuel excise and license taxation, motor vehicle registration and license taxes, except revenue from aviation gasoline and unclaimed aviation motor fuel refunds and other aviation motor fuel excise and license taxation used by aircraft, after deduction of cost of administration and collection authorized by legislative appropriation only, and statutory refunds, shall be appropriated and used solely for construction, reconstruction, repair and maintenance of public highways, and the payment of obligations incurred in the construction, reconstruction, repair and maintenance of public highways."

Ohio

Very Challenging (Legal, Ideology, Economy)

Summary: Ohio is very challenging for legal, ideological and economic reasons.

Ohio is very challenging because electricity sector emissions are high, the legislature is conservative, voters are skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈27% of emissions) to go to highway purposes. One bright spot is that the state is ranked as a strong focal-point state by one climate-focused group. There is a ballot measure option in Ohio.

Emissions

Per-capita emissions in 2014 were 1.2x the U.S. average, with average industrial sector emissions and high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Ohio (per capita)	Ohio (% of total)
Total	17.0	20.0	100%
Commercial	0.7	1.0	5%
Electric Power	6.3	8.4	42%
Residential	1.1	1.7	8%
Industrial	3.0	3.4	17%
Transportation	5.8	5.5	27%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,511 lbs CO2/MWh) was 1.4x the U.S. average. The high per-capita emissions figure for 2014 is especially noteworthy given that imports amount to about 20% of power consumption. It is driven by industrial consumption and coal-fired power; EIA notes that "[t]he industrial sector is the largest energy-consuming sector in the state" and that coal-fired generation has been declining but "still fuels more than half of the state's electricity generation."

Climate impacts

Ranked #13 for extreme heat by States at Risk.

Existing climate policies

EIA notes that "Ohio has both an Alternative Energy Portfolio Standard (AEPS) and an Energy Efficiency Portfolio Standard (EEPS)."

Carbon pricing activism

Ranked as a strong focal-point state by one climate-focused group, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are moderate; the legislature is conservative. Republicans control the state Senate (24-9), the state House (66-33), and the Governor's office. Last December Gov. John Kasich vetoed a bill that would have permitted the state's investor-owned electric utilities to avoid investing in renewable energy during 2017 and 2018, stating that Ohio's "wide range of energy generation options" had helped to grow jobs in

the state over the past six years. Ohio has 20 electoral college votes (ranked #7) and is the prototypical (and crucial) swing state in Presidential campaigns.

Percent agreeing, 2016, and rank (out of 51)	U.S.	Ohio	Rank
Global warming is mostly caused by human activities	53%	52%	27
Worried about global warming	58%	53%	35
Global warming will harm me personally	40%	35%	38
Support regulating CO2 as a pollutant	75%	74%	28
Support carbon tax if refunded (2014)	44%	43%	34
Support or undecided about carbon tax (2014)	75%	73%	40

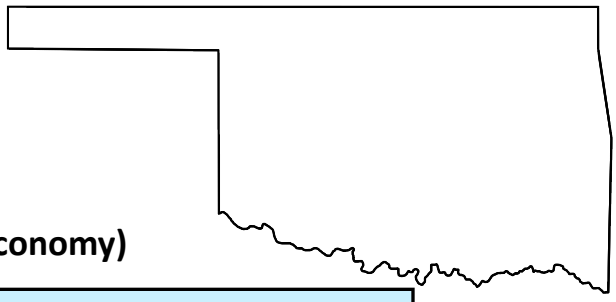
Source: Yale Climate Opinion Maps

Ballot measures

There were 3 citizen initiatives in 2016. Citizen initiatives go to the ballot indirectly as statutes or directly as constitutional amendments. More here.

Legal note

The Ohio Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 12, section 5(a): "No moneys derived from fees, excises, or license taxes relating to registration, operation, or use of vehicles on public highways, or to fuels used for propelling such vehicles, shall be expended for other than costs of administering such laws, statutory refunds and adjustments provided therein, payment of highway obligations, costs for construction, reconstruction, maintenance and repair of public highways and bridges and other statutory highway purposes, expense of state enforcement of traffic laws, and expenditures authorized for hospitalization of indigent persons injured in motor vehicle accidents on the public highways."



Oklahoma

Very Challenging (Ideology, Economy)

Summary: Oklahoma is very challenging for ideological and economic reasons.

Oklahoma is very challenging because industrial and electricity sector emissions are high and because citizens and the legislature are conservative and are skeptical on climate issues. On the other hand, Oklahoma is the country's fourth largest generator of wind electricity, trailing only Texas, Iowa and California. There is a ballot measure option in Oklahoma.

Emissions

Per-capita emissions in 2014 were 1.6x the U.S. average, with high industrial sector emissions and high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Oklahoma (per capita)	Oklahoma (% of total)
Total	17.0	27.1	100%
Commercial	0.7	0.8	3%
Electric Power	6.3	10.8	40%
Residential	1.1	1.1	4%
Industrial	3.0	5.9	22%
Transportation	5.8	8.4	31%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,203 lbs CO2/MWh) was 1.1x the U.S. average. The high per-capita emissions figure for 2014 is mostly driven by industrial consumption (EIA notes that Oklahoma has "energy-intensive petroleum and natural gas industries") and electricity exports, which amount to about 10% of power generation. EIA also notes that Oklahoma has "significant wind potential" and "widespread" solar potential. It is the fourth-largest wind power producer in the United States, and the second largest per capita.

Climate impacts

Ranked #20 for extreme heat and #12 for drought by States at Risk. In July 2011, the state registered the highest monthly-average temperature ever recorded for a U.S. state: 88.9°F. Also potentially relevant may be Oklahoma's Dust Bowl legacy, as well as the more recent epidemic of earthquakes caused by the injection of wastewater from oil and gas fracking.

Existing climate policies

None.

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

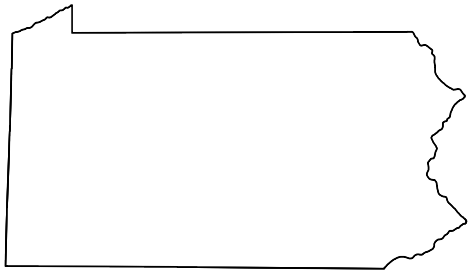
Citizens and the legislature are very conservative. Republicans control the state Senate (42-6), the House (75-26), and the Governor's office. The state has 7 electoral college votes (tied for #27).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Oklahoma	Rank
Global warming is mostly caused by human activities	53%	46%	46
Worried about global warming	58%	50%	45
Global warming will harm me personally	40%	35%	40
Support regulating CO2 as a pollutant	75%	68%	49
Support carbon tax if refunded (2014)	44%	39%	50
Support or undecided about carbon tax (2014)	75%	73%	41

Source: Yale Climate Opinion Maps

Ballot measures

There were 3 citizen initiatives in 2016. Citizen initiatives go directly to the ballot, either as statute or as constitutional amendments. More here.



Pennsylvania

Very Challenging (Legal, Economy)

Summary: Pennsylvania is very challenging for legal and economic reasons.

Pennsylvania is very challenging because industrial sector emissions are high and the state constitution appears to require revenues from taxes on gasoline and diesel (≈25% of emissions) to go to highway purposes. Grounds for optimism include grassroots climate strength and moderate-to-liberal citizens who are average on most climate issues but unusually supportive of carbon taxes (46%, ranked #11). There is no ballot measure option in Pennsylvania.

Emissions

Per-capita emissions in 2014 were 1.1x the U.S. average, with high industrial sector emissions and above-average electricity sector emissions (note that 25-30% of power generation is exported).

Tonnes CO2 (2014)	U.S. (per capita)	Pennsylvania (per capita)	Pennsylvania (% of total)
Total	17.0	19.2	100%
Commercial	0.7	0.9	5%
Electric Power	6.3	7.7	40%
Residential	1.1	1.7	9%
Industrial	3.0	4.1	21%
Transportation	5.8	4.7	25%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (933 lbs CO2/MWh) was 0.9x the U.S. average. (Over one-third of net generation is from nuclear.) The high per-capita emissions figure for 2014 is mostly due to power exports: EIA figures show that 25-30% of power generation is exported. EIA also notes that the "industrial sector leads energy consumption in the state" and that "[t]he Marcellus Shale, the largest U.S. natural gas field, underlies about three-fifths of the state in an arc reaching from the southwest to the northeast."

Climate impacts

Ranked #21 for extreme heat by States at Risk.

Existing climate policies

EIA notes that "Pennsylvania's alternative energy portfolio standards (AEPS), being phased in from 2007 to 2021, require 18% of electricity provided by generation and distribution companies to come from renewable sources by 2021, with at least 0.5% from solar power."

Carbon pricing activism

Ranked #4 by one carbon pricing group in terms of per-capita strength, but there are no campaigns listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are moderate to liberal; the legislature is moderate. Republicans control the state Senate (34-16) and the state House (122-80, with 1 Other), but Democrats control the Governor's office. The state has 29 electoral college votes (tied for #5).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Pennsylvania	Rank
Global warming is mostly caused by human activities	53%	53%	22
Worried about global warming	58%	58%	19
Global warming will harm me personally	40%	38%	26
Support regulating CO2 as a pollutant	75%	76%	17
Support carbon tax if refunded (2014)	44%	46%	11
Support or undecided about carbon tax (2014)	75%	76%	16

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Pennsylvania.

Legal note

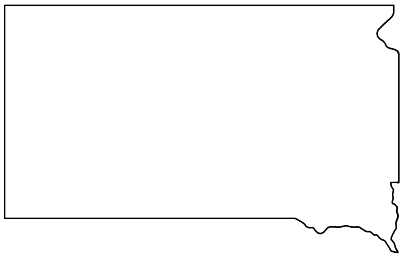
The Pennsylvania Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 8, section 11:

(a) All proceeds from gasoline and other motor fuel excise taxes, motor vehicle registration fees and license taxes, operators' license fees and other excise taxes imposed on products used in motor transportation after providing therefrom for

  (a) (a) cost of administration and collection,

  (b) b) payment of obligations incurred in the construction and reconstruction of public highways and bridges shall be appropriated by the General Assembly to agencies of the State or political subdivisions thereof; and used solely for construction, reconstruction, maintenance and repair of and safety on public highways and bridges and costs and expenses incident thereto, and for the payment of obligations incurred for such purposes, and shall not be diverted by transfer or otherwise to any other purpose, except that loans may be made by the State from the proceeds of such taxes and fees for a single period not exceeding eight months, but no such loan shall be made within the period of one year from any preceding loan, and every loan made in any fiscal year shall be repayable within one month after the beginning of the next fiscal year.

(b) All proceeds from aviation fuel excise taxes, after providing therefrom for the cost of administration and collection, shall be appropriated by the General Assembly to agencies of the State or political subdivisions thereof and used solely for: the purchase, construction, reconstruction, operation and maintenance of airports and other air navigation facilities; aircraft accident investigation; the operation, maintenance and other costs of aircraft owned or leased by the Commonwealth; any other purpose reasonably related to air navigation including but not limited to the reimbursement of airport property owners for property tax expenditures; and costs and expenses incident thereto and for the payment of obligations incurred for such purposes, and shall not be diverted by transfer or otherwise to any other purpose."



South Dakota

Very Challenging (Legal, Ideology, Economy)

Summary: South Dakota is very challenging for legal, ideological and economic reasons. *South Dakota is very challenging because industrial sector emissions are high, citizens and the legislature are conservative-to-very-conservative and are skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈43% of emissions) to go to highway purposes. There is a ballot measure option in South Dakota.*

Emissions

Per-capita emissions in 2014 were slightly above the U.S. average, with high industrial sector emissions and low electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	South Dakota (per capita)	South Dakota (% of total)
Total	17.0	18.0	100%
Commercial	0.7	1.0	5%
Electric Power	6.3	3.5	20%
Residential	1.1	1.3	7%
Industrial	3.0	4.4	25%
Transportation	5.8	7.8	43%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (443 lbs CO2/MWh) was 0.4x the U.S. average. Although the per-capita emissions figure for 2014 appears to be significantly below the U.S. average, it's worth cautioning that this figure is for in-state generation only and that EIA data shows that imports have accounted for about 15-25% of power consumption in recent years. EIA also notes that "hydroelectric power supplies almost half of the state's net generation", that "substantial renewable resources are found statewide", and that "[i]ndustry is South Dakota's leading energy-consuming sector… The industrial sector includes South Dakota's many farms, as well as its growing manufacturing industries. Food processing and the manufacture of farm and construction machinery, fabricated metal products, transportation equipment, and computers are the state's leading manufacturing activities."

Climate impacts

No top rankings from States at Risk.

Existing climate policies

EIA notes that a policy passed in 2014 sets "a target of 2% of aggregate generation capacity from renewable resources by 2021."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are conservative; the legislature is conservative to very conservative. Republicans control the

state Senate (29-6), the House (60-10), and the Governor's office. The state has 3 electoral college votes (tied for fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	South Dakota	Rank
Global warming is mostly caused by human activities	53%	49%	35
Worried about global warming	58%	53%	36
Global warming will harm me personally	40%	33%	46
Support regulating CO2 as a pollutant	75%	71%	36
Support carbon tax if refunded (2014)	44%	45%	17
Support or undecided about carbon tax (2014)	75%	76%	17

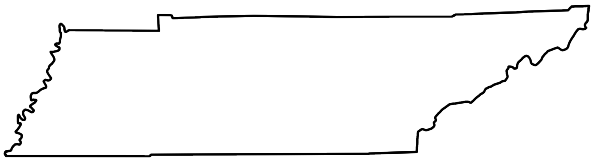
Source: Yale Climate Opinion Maps

Ballot measures

There were 7 citizen initiatives in 2016. Citizen initiatives go directly to the ballot, either as statute or as constitutional amendments. More here.

Legal note

The South Dakota Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 11, section 8: "No tax shall be levied except in pursuance of a law, which shall distinctly state the object of the same, to which the tax only shall be applied, and the proceeds from the imposition of any license, registration fee, or other charge with respect to the operation of any motor vehicle upon any public highways in this state and the proceeds from the imposition of any excise tax on gasoline or other liquid motor fuel except costs of administration and except the tax imposed upon gasoline or other liquid motor fuel not used to propel a motor vehicle over or upon public highways of this state shall be used exclusively for the maintenance, construction and supervision of highways and bridges of this state."



Tennessee

Very Challenging (Ideology, Economy)

Summary: Tennessee is very challenging for ideological and economic reasons.

Tennessee is very challenging because citizens and the legislature are conservative-to-very-conservative and are very skeptical on climate issues, especially carbon taxes. In addition, industrial sector emissions and electricity sector emissions are a challenge. There is no ballot measure option in Tennessee.

Emissions

Per-capita and sectoral emissions in 2014 closely matched the U.S. average.

Tonnes CO2 (2014)	U.S. (per capita)	Tennessee (per capita)	Tennessee (% of total)
Total	17.0	15.8	100%
Commercial	0.7	0.6	4%
Electric Power	6.3	5.7	36%
Residential	1.1	0.7	5%
Industrial	3.0	2.5	16%
Transportation	5.8	6.3	40%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,111 lbs CO2/MWh) was 1.0x the U.S. average. Although the per-capita emissions figure for 2014 appears to be slightly below the U.S. average, that figure is for in-state generation only. EIA data shows that imports account for 25-30% of power consumption, and adjusting for this would place per-capita emissions somewhat above the U.S. average, primarily because of industrial sector emissions: EIA also notes that "Manufacturing leads the state's economy and includes the manufacture of motor vehicles and automotive parts; food, beverages, and tobacco products; and chemical products."

Climate impacts

Ranked #8 for extreme heat and #7 for inland flooding by States at Risk.

Existing climate policies

None.

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are very conservative; the legislature is conservative to very conservative. Republicans control the state Senate (28-5), the House (74-25), and the Governor's office. The state has 11 electoral college votes (tied for #14).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Tennessee	Rank
Global warming is mostly caused by human activities	53%	48%	40
Worried about global warming	58%	51%	42
Global warming will harm me personally	40%	36%	31
Support regulating CO2 as a pollutant	75%	70%	41
Support carbon tax if refunded (2014)	44%	41%	45
Support or undecided about carbon tax (2014)	75%	75%	24

Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Tennessee.

Texas

Very Challenging (Legal, Ideology, Economic)

Summary: Texas is very challenging for legal, ideological and economic reasons.

Industrial and electricity sector emissions are high, citizens and the legislature are very conservative and moderate-to-skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈35% of emissions) to go to highway purposes (except for one-quarter which goes to public schools). There is no ballot measure option in Texas. Modest grounds for optimism include the strength reported by one climate-focused group in the state, the fact that Texans appear to have internalized that they are personally vulnerable to climate impacts, and the state's pre-eminence in U.S. wind power production, generating 25 percent of total U.S. wind electricity and nearly triple the output from the next largest state (2016 data).

Emissions

Per-capita emissions in 2014 were 1.4x the U.S. average, with very high industrial sector emissions and high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Texas (per capita)	Texas (% of total)
Total	17.0	23.8	100%
Commercial	0.7	0.4	2%
Electric Power	6.3	8.3	35%
Residential	1.1	0.5	2%
Industrial	3.0	6.3	26%
Transportation	5.8	8.2	35%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,190 lbs CO2/MWh) was 1.1x the U.S. average. The above-average per-capita emissions figure for 2014 is mostly due to industrial consumption: EIA notes that Texas "has many energy-intensive industries, including petroleum refining and chemical manufacturing, and its industrial sector accounts for the largest share of state energy use." EIA also notes that power generation is roughly 1/2 natural gas, 1/4 coal, and 1/4 nuclear and renewables, primarily wind; and that the state has significant potential for wind, solar, and geothermal power. EIA data shows that the state only ranks #26 for small-scale solar generation per-capita.

Climate impacts

Ranked #1 for extreme heat, #1 for drought, and #1 for wildfire by States at Risk. In 2011, Texas registered the highest three-month state average temperature in U.S. history: 86.8°F over June, July and August

Existing climate policies

Texas set renewable energy targets for 2015 and 2025, but these were met by 2005 and 2009, respectively.

Carbon pricing activism

(1) Ranked #3 by one carbon pricing group in terms of per-capita strength. (2) Climate X-Change's State Carbon Pricing Network says a listing for a campaign is "coming soon."

Ideology and politics

Citizens and the legislature are very conservative. Republicans control the state Senate (20-11), the House (94-56), and the Governor's office. The state has 38 electoral college votes (ranked #2).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Texas	Rank
Global warming is mostly caused by human activities	53%	52%	29
Worried about global warming	58%	57%	20
Global warming will harm me personally	40%	42%	8
Support regulating CO2 as a pollutant	75%	71%	37
Support carbon tax if refunded (2014)	44%	43%	36
Support or undecided about carbon tax (2014)	75%	76%	18

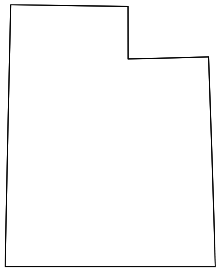
Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in Texas.

Legal note

The Texas Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes (except that one-quarter goes to schools). See article 8, section 7-a: "Subject to legislative appropriation, allocation and direction, all net revenues remaining after payment of all refunds allowed by law and expenses of collection derived from motor vehicle registration fees, and all taxes, except gross production and ad valorem taxes, on motor fuels and lubricants used to propel motor vehicles over public roadways, shall be used for the sole purpose of acquiring rights-of-way, constructing, maintaining, and policing such public roadways, and for the administration of such laws as may be prescribed by the Legislature pertaining to the supervision of traffic and safety on such roads; and for the payment of the principal and interest on county and road district bonds or warrants voted or issued prior to January 2, 1939, and declared eligible prior to January 2, 1945, for payment out of the County and Road District Highway Fund under existing law; provided, however, that one-fourth (1/4) of such net revenue from the motor fuel tax shall be allocated to the Available School Fund; and, provided, however, that the net revenue derived by counties from motor vehicle registration fees shall never be less than the maximum amounts allowed to be retained by each County and the percentage allowed to be retained by each County under the laws in effect on January 1, 1945. Nothing contained herein shall be construed as authorizing the pledging of the State's credit for any purpose."



Utah

Very Challenging (Legal, Ideology)

Summary: Utah is very challenging for legal and ideological economic reasons.

Utah is very challenging because electricity sector emissions are high, citizens and the legislature are conservative and are skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈26% of emissions) to go to highway purposes. There is a ballot measure option in Utah but it has been used very infrequently. Modest grounds for optimism include the slightly below-average industrial sector emissions, the strength reported by one climate-focused group in the state, and the introduction of a carbon tax bill by a state representative.

Emissions

Per-capita emissions in 2014 were 1.3x the U.S. average, with slightly below-average industrial sector emissions and high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Utah (per capita)	Utah (% of total)
Total	17.0	22.2	100%
Commercial	0.7	0.8	4%
Electric Power	6.3	11.7	53%
Residential	1.1	1.2	5%
Industrial	3.0	2.8	12%
Transportation	5.8	5.7	26%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (1,767 lbs CO2/MWh) was 1.6x the U.S. average. The high per-capita emissions figure for 2014 is due to a combination of power exports and coal-fired power. According to EIA figures, about 20% of power generation is exported, and EIA notes that "Utah's largest generating station, which was constructed to deliver the majority of its output to California, is operated by the Los Angeles Department of Water and Power. EIA also notes that "In 2015, three-fourths of Utah's net electricity generation came from coal, down from the share a decade ago, when coal routinely fueled more than nine-tenths of generation. Most electric generating capacity built recently in Utah has been fueled by natural gas, and one-fifth of 2015 net generation came from natural gas."

Climate impacts

No top rankings from States at Risk.

Existing climate policies

EIA notes that "Utah has a renewable portfolio goal that requires all distribution utilities to pursue renewable energy resources to the extent that it is cost-effective, with the goal of acquiring 20% of the electricity they sell from qualifying renewable sources by 2025."

Carbon pricing activism

(1) Ranked #10 by one carbon pricing group in terms of per-capita strength. (2) A carbon tax bill is supposedly being introduced in the state legislature in 2017, but there has been no news about it since

December 2016. (3) Climate X-Change's State Carbon Pricing Network says a listing for a campaign is "coming soon."

Ideology and politics

Citizens and the legislature are very conservative. Republicans control the state Senate (24-5), the House (62-13), and the Governor's office. The state has 6 electoral college votes (tied for #30).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Utah	Rank
Global warming is mostly caused by human activities	53%	43%	50
Worried about global warming	58%	48%	49
Global warming will harm me personally	40%	34%	43
Support regulating CO2 as a pollutant	75%	67%	50
Support carbon tax if refunded (2014)	44%	41%	46
Support or undecided about carbon tax (2014)	75%	75%	25

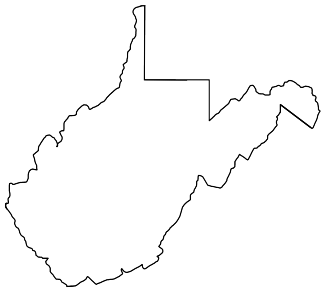
Source: Yale Climate Opinion Maps

Ballot measures

There were 0 citizen initiatives in 2016 (and 0 since at least 2010). Citizen initiatives go directly to the ballot as statute. More here.

Legal note

The Utah Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 13, section 5(6): "Proceeds from fees, taxes, and other charges related to the operation of motor vehicles on public highways and proceeds from an excise tax on liquid motor fuel used to propel those motor vehicles shall be used for: (a) statutory refunds and adjustments and costs of collection and administration; (b) the construction, maintenance, and repair of State and local roads, including payment for property taken for or damaged by rights-of-way and for associated administrative costs; (c) driver education; (d) enforcement of state motor vehicle and traffic laws; and (e) the payment of the principal of and interest on any obligation of the State or a city or county, issued for any of the purposes set forth in Subsection (6)(b) and to which any of the fees, taxes, or other charges described in this Subsection (6) have been pledged, including any paid to the State or a city or county, as provided by statute."



West Virginia

Very Challenging (Legal, Ideology, Economy)

Summary: West Virginia is very challenging for legal, ideological and economic reasons. *In addition to the prominent coal industry, industrial and electricity sector emissions are high, citizens and the legislature are conservative and are skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈11% of emissions) to go to highway purposes. There is no ballot measure option in West Virginia.*

Emissions

Per-capita emissions in 2014 were 3.1x the U.S. average, with high industrial sector emission and extremely high electricity sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	West Virginia (per capita)	West Virginia (% of total)
Total	17.0	53.2	100%
Commercial	0.7	0.9	2%
Electric Power	6.3	39.7	75%
Residential	1.1	1.0	2%
Industrial	3.0	5.6	11%
Transportation	5.8	6.0	11%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (2,017 lbs CO2/MWh) was 1.8x the U.S. average. The extremely high per-capita emissions figure for 2014 is due to a combination of power exports, industrial consumption, and coal-fired power. According to EIA figures, about 55% of power generation is exported. EIA also notes that coal plants "account for nearly all of West Virginia's electricity generation" and that "[m]ining, including coal, crude oil, and natural gas extraction, is a large and energy-intensive part of the state's economy. The energy-intensive chemical and primary metals manufacturing industries are also major economic activities in the state."

Climate impacts

Ranked #23 for extreme heat by States at Risk.

Existing climate policies

None. EIA notes that "[i]n 2015, West Virginia became the first state to repeal its renewable portfolio standard" and that "the legislature further limited net metering."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are moderate; the legislature is moderate to liberal. Republicans control the state Senate (22-12) and the House (63-36, with 1 Independent), but Democrats control the Governor's office. The state has 5 electoral college votes (tied for #36).

Percent agreeing, 2016, and rank (out of 51)	U.S.	West Virginia	Rank
Global warming is mostly caused by human activities	53%	44%	49
Worried about global warming	58%	45%	51
Global warming will harm me personally	40%	30%	49
Support regulating CO2 as a pollutant	75%	69%	48
Support carbon tax if refunded (2014)	44%	39%	51
Support or undecided about carbon tax (2014)	75%	70%	49

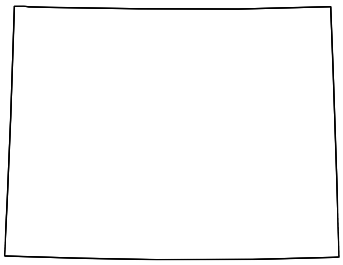
Source: Yale Climate Opinion Maps

Ballot measures

There are no ballot measures in West Virginia.

Legal note

The West Virginia Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 6, section 52: "Revenue from gasoline and other motor fuel excise and license taxation, motor vehicle registration and license taxes, and all other revenue derived from motor vehicles or motor fuels shall, after the deduction of statutory refunds and cost of administration and collection authorized by legislative appropriation, be appropriated and used solely for construction, reconstruction, repair and maintenance of public highways, and also the payment of the interest and principal on all road bonds heretofore issued or which may be hereafter issued for the construction, reconstruction or improvement of public highways, and the payment of obligations incurred in the construction, reconstruction, repair and maintenance of public highways."



Wyoming

Very Challenging (Legal, Ideology, Economy)

Summary: Wyoming is very challenging for legal, ideological and economic reasons.

Wyoming is very challenging because industrial and electricity sector emissions are extremely high, citizens and the legislature are conservative and are skeptical on climate issues, and the state constitution appears to require revenues from taxes on gasoline and diesel (≈12% of emissions) to go to highway purposes. Moreover, the state is highly dependent on coal for jobs and tax revenues – it is the source of 40 percent of all coal mined in the U.S. – and with the use of coal diminishing rapidly across the U.S. it would be extraordinarily unlikely for voters or their elected representatives to back a carbon tax. In fact, in 2016 the legislature considered (and rejected) a proposed tax on wind energy production that was floated as a means to stem the decline in demand for coal. There is a ballot measure option in Wyoming, but it has been used infrequently.

Emissions

Per-capita emissions in 2014 were 6.6x the U.S. average, with extremely high industrial sector emissions and extremely high electricity sector emissions. There were also very high commercial and transportation sector emissions.

Tonnes CO2 (2014)	U.S. (per capita)	Wyoming (per capita)	Wyoming (% of total)
Total	17.0	112.4	100%
Commercial	0.7	1.9	2%
Electric Power	6.3	74.1	66%
Residential	1.1	1.6	1%
Industrial	3.0	21.0	19%
Transportation	5.8	13.9	12%

Source: 2014 data from EIA SEDS

Electricity sector notes

In 2015, the CO2 emissions rate for electricity (2,133 lbs CO2/MWh) was 2.0x the U.S. average. The extremely high per-capita emissions figure for 2014 is due to a combination of power exports, industrial consumption, and coal-fired power. EIA figures show that about 60% of power is exported. EIA also notes that "the industrial sector is the largest electricity consumer, accounting for more than half of the electricity used in the state" and that "coal-fired power plants dominate Wyoming electricity generation, producing about 8 of every 9 kilowatthours of net generation. Wind energy's share has increased rapidly in the last 10 years and contributed nearly 8% of net electricity generation in 2015."

Climate impacts

No top rankings from States at Risk.

Existing climate policies

None other than "net metering for residential, commercial, and industrial customers with renewable energy systems smaller than 25 kilowatts."

Carbon pricing activism

None that we are aware of, and none listed by Climate X-Change's State Carbon Pricing Network.

Ideology and politics

Citizens are very conservative; the legislature is conservative to very conservative. Republicans control the state Senate (27-3), the state House (51-9), and the Governor's office. The state has 3 electoral college votes (tied for fewest).

Percent agreeing, 2016, and rank (out of 51)	U.S.	Wyoming	Rank
Global warming is mostly caused by human activities	53%	42%	51
Worried about global warming	58%	46%	50
Global warming will harm me personally	40%	29%	50
Support regulating CO2 as a pollutant	75%	66%	51
Support carbon tax if refunded (2014)	44%	40%	48
Support or undecided about carbon tax (2014)	75%	71%	48

Source: Yale Climate Opinion Maps

Ballot measures

There were 0 citizen initiatives in 2016 (and 0 since 1996, but 7 since 1968). Citizen initiatives go directly to the ballot as statute. More here from Ballotpedia, which notes that initiatives may not "dedicate revenues" or "make or repeal appropriations".

Legal note

The Wyoming Constitution appears to require revenues from taxes on gasoline and diesel to go to highway purposes. See article 15, section 16: "No moneys derived from fees, excises, or license taxes levied by the state and exclusive of registration fees and licenses or excise taxes imposed by a county or municipality, relating to registration, operation or use of vehicles on public highways, streets or alleys, or to fuels used for propelling such vehicles, shall be expended for other than cost of administering such laws, statutory refunds and adjustments allowed therein, payment of highway obligations, costs for construction, reconstruction, maintenance and repair of public highways, county roads, bridges, and streets, alleys and bridges in cities and towns, and expense of enforcing state traffic laws."