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Energy-Related Carbon Dioxide Emissions at the State Level, 2000-2013

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Overview

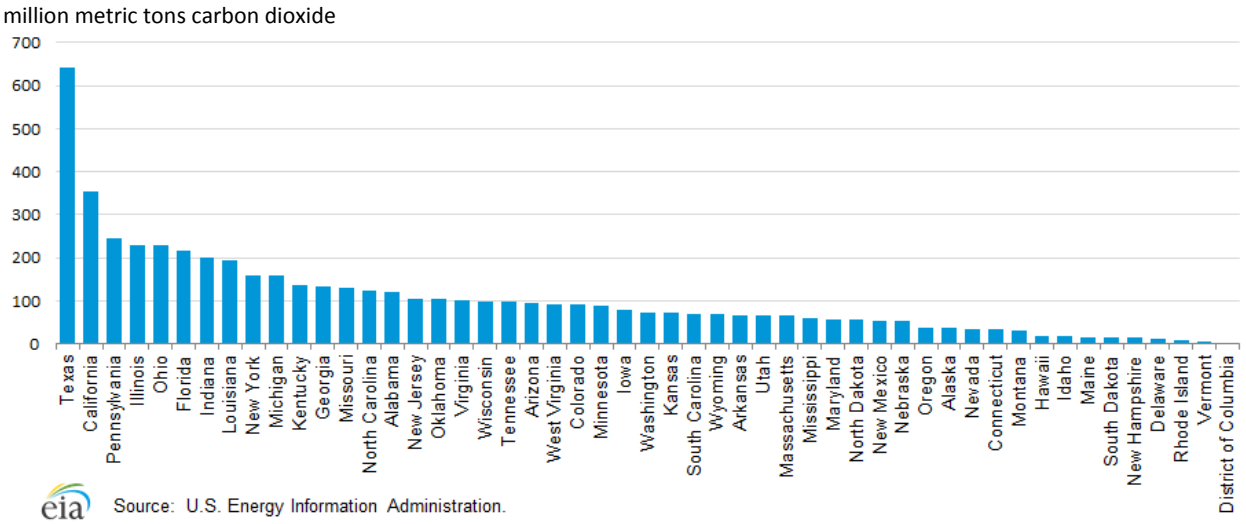
Energy-related carbon dioxide (CO2) emissions vary significantly across states, whether considered on an absolute (Figure 1) or per capita basis. Total state CO2 emissions include those from direct fuel use across all sectors, including residential, commercial, industrial, and transportation, as well as primary fuels consumed for electric generation. The overall size of a state, as well as the available fuels, types of businesses, climate, and population density, play a role in determining the level of both total and per capita emissions. Additionally, each state's energy system reflects circumstances specific to that state. For example, some states have abundant hydroelectric supplies, while others contain abundant coal resources. This paper presents a basic analysis of the factors that contribute to a state's CO2 profile. This analysis neither attempts to assess the effect of state policies on absolute emissions levels or on changes over time, nor does it intend to imply that certain policies would be appropriate for a particular state.

The term *energy-related CO2 emissions*, as used in this paper, includes emissions released at the location where fossil fuels are consumed. Therefore, to the extent that fuels are used in one state to generate electricity that is consumed in another state, emissions are attributed to the former rather than the latter. Analysis attributing emissions to the consumption of electricity, rather than the production of electricity, would yield different results. For feedstock application, carbon stored in products such as plastics are subtracted from reported emissions for the states where they are produced.

Total state emission levels

Over the time period from 2000 to 2013, CO2 emissions fell in 37 states and rose in 13 states (Table 1). The greatest percentage decrease in CO2 emissions occurred in Maine at 27%, or 6 million metric tons (mt). The greatest absolute decline was 52 million mt in New York (25%). The state with both the greatest percentage and absolute increase was Nebraska, at 28% (11 million mt).

Figure 1. Energy-related carbon dioxide emissions by state, 2013



From 2012 to 2013, 16 states saw a decrease in emissions, while 34 experienced an increase. This is reflected in the national data for 2013 as emissions were up about 2.5%. Because of differences in data aggregations it is difficult to compare the total for all states with the total for the United States. See Appendix A for a comparison of levels of data detail between the state and national data systems.

Emissions by fuel

States exhibit very different emissions profiles by fuel type (Table 2). For example, in 2013, coal consumption accounted for 78% of CO2 emissions in West Virginia. In California, 1% of CO2 emissions came from coal, with 62% from petroleum. In Rhode Island, which had no emissions from coal, 47% of emissions were from natural gas. Hawaii's and Vermont's share of CO2 emissions from petroleum in 2013 were 92% and 91%, respectively. Maine's petroleum share was 77%. No other state's petroleum share exceeded 70%.

Emissions by sector

There can also be significant variations in terms of CO2 emissions by sector (Tables 3 and 4). These variations are due to factors such as the use of different fuels for electricity generation, climate, and sources of economic outputs (e.g., commercial versus industrial activity). For example, in Vermont the largest share of emissions in 2013 came from the transportation sector (56%), predominantly from petroleum, but the electric power sector share was 0.2% because Vermont had almost no generation using fossil fuels. Vermont's residential sector share was 23%—indicative of a relatively cold climate where petroleum is the main heating fuel. Hawaii, where a dominant share of emissions is also from petroleum, had a residential share of 0.3%—the lowest in the United States, because of minimal heating fuel requirements. The largest sector emissions share in Hawaii, like Vermont, was from the transportation sector (53%). However, unlike Vermont, Hawaii's electric power sector share was relatively high (37%). The dominant fossil fuel for the generation of electricity in Hawaii is petroleum.

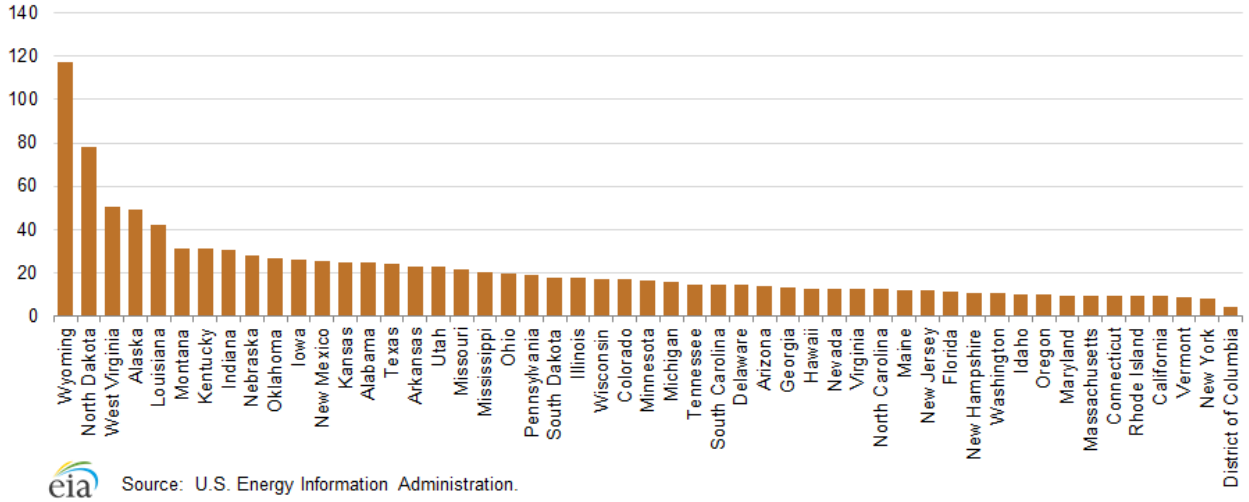
Per capita carbon dioxide emissions

Another useful way to compare total CO2 emissions across states is to divide them by state population and examine them on a per capita basis (Table 5 and Figure 2). Many factors contribute to variation in the amount of emissions per capita, including climate, the structure of the state economy, population density, energy sources, building standards and explicit state policies to reduce emissions. The 2013 CO2 emissions in Wyoming were 117 mt per capita, the highest in the United States. In 2013, Wyoming was the second- largest energy producer in the United States. Unlike the largest energy producer, Texas, with a population of 26 million, Wyoming has less than 600,000 people, giving Wyoming the lowest population density in the lower 48 states.[1] Its winters are cold (the average low temperatures in January range between 5 to 10 degrees Fahrenheit[2]). These factors act to raise Wyoming's per capita emissions compared to other states. The second-highest state per capita CO2 emissions level was North Dakota at 78 mt per capita. West Virginia (50 mt per capita), Alaska (49 mt per capita), and Louisiana (42 mt per capita) round out the top five states in terms of per capita CO2 emissions.

[1] U.S. Energy Information Administration, State Profiles and Energy Estimates: http://www.eia.gov/state/.
[2] http://www.wrcc.dri.edu/narratives/WYOMING.htm.

Figure 2. Per capita energy-related carbon dioxide emissions by state, 2013

metric tons carbon dioxide per person



New York, with a population of 19.6 million people, had the lowest per capita CO2 emissions – 8 mt per capita. A large portion of the population is located in the New York City metropolitan area where mass transit is readily available and most residences are multi-family units that provide efficiencies of scale in terms of energy for heating and cooling. The New York economy is oriented towards low-energy-consuming activities such as financial markets. For example, New York contained about 6% of the U.S. population in 2013, but consumed only 1% of the country's industrial energy.[3] New York's energy prices are relatively high (the average retail electricity price of 15.20 cents per kWh was fourth highest in the country in 2013), which in turn encourages energy savings.[4] The other states with lowest per capita CO2 emissions—all around 9 mt per capita—include California, Connecticut, Rhode Island, and Vermont.

Energy intensity

The energy intensity of a state, as measured by the amount of energy consumed per unit of economic output or, specifically, British thermal units (Btu) per dollar of a state's gross domestic product (GDP), plays an important role in its overall emissions profile (Table 6). The states with the highest rates of emissions per capita in 2013 also tended to have the higher energy intensity values: Wyoming (25,000 Btu per chained 2009 dollar of GDP), Louisiana, North Dakota, and West Virginia (all around 18,000 Btu per dollar), and Montana (14,000 Btu per dollar). California, Connecticut, Maryland, Massachusetts, New York, and Rhode Island were the lowest – all around 3,000 Btu per dollar or less. Many of the states with the lowest energy intensity are clustered in the relatively densely populated New England and Middle Atlantic regions. The 2013 national average was 6,000 Btu per dollar of GDP.

[3] U.S. Energy Information Administration, State Energy Data 2013, state population and energy consumption by sector.
[4] U.S. Energy Information Administration, State Electricity Profiles, Table 1, 2013 Summary Statistics http://www.eia.gov/electricity/state/newyork/pdf/New_York.pdf.

Carbon intensity of the energy supply

The carbon intensity of energy supply (CO2/Btu) is reflective of the energy fuel mix within a state (Table 7). As with energy intensity, the states with high carbon intensity of energy supply tend to be the states with high per capita emissions. The top five states in 2013 in terms of the carbon intensity of the energy supply as measured in kilograms of CO2 per million Btu (kg CO2/MMBtu)—West Virginia (80 kg CO2/MMBtu), Wyoming (77 kg CO2/MMBtu), Kentucky (76 kg CO2/MMBtu), Utah (72 kg CO2/MMBtu), and North Dakota (71 kg CO2/MMBtu)—are all states with coal as the dominant emissions source (Table 2). The national average carbon intensity of the energy supply in 2013 was 55 kg CO2/MMBtu. The states with lower carbon intensity of their energy supply tend to be those states with relatively substantial non-carbon electricity generation such as nuclear or hydropower. These states include, for example, Vermont (26 kg CO2/MMBtu), Washington (35 kg CO2/MMBtu), Oregon and New Hampshire (both 36 kg CO2/MMBtu), and Maine (38 kg CO2/MMBtu).

Carbon intensity of the economy

Another measure, the overall carbon intensity of the economy (CO2/dollar of state GDP), combines energy intensity with the carbon intensity of that state's energy supply. As one would expect, the states with the highest carbon intensity of their economies (Table 8) as measured in metric tons (mt) of CO2 per million dollars of state GDP (mt CO2/million chained 2009 dollars of GDP) are also the states with the highest values of energy intensity and carbon intensity of that energy supply. In 2013, these states included: Wyoming (1,915 mt CO2/million dollars of GDP), West Virginia (1,441 mt CO2/million dollars of GDP) North Dakota (1,247 mt CO2/million dollars of GDP), Louisiana (918 mt CO2/million dollars of GDP), and Montana (819 mt CO2/million dollars of GDP). The 2013 U.S. average was 336 mt CO2/ million dollars of GDP. The states with the lowest carbon intensity of economic activity are also states that appear on the lower end of both energy intensity and the carbon intensity of that energy supply. These states include: New York (128 mt CO2/million dollars of GDP), Connecticut (148 mt CO2/million dollars of GDP), Massachusetts (157 mt CO2/million dollars of GDP), California (172 mt CO2/million dollars of GDP) and Maryland (182 mt CO2/million dollars of GDP).

Electricity trade

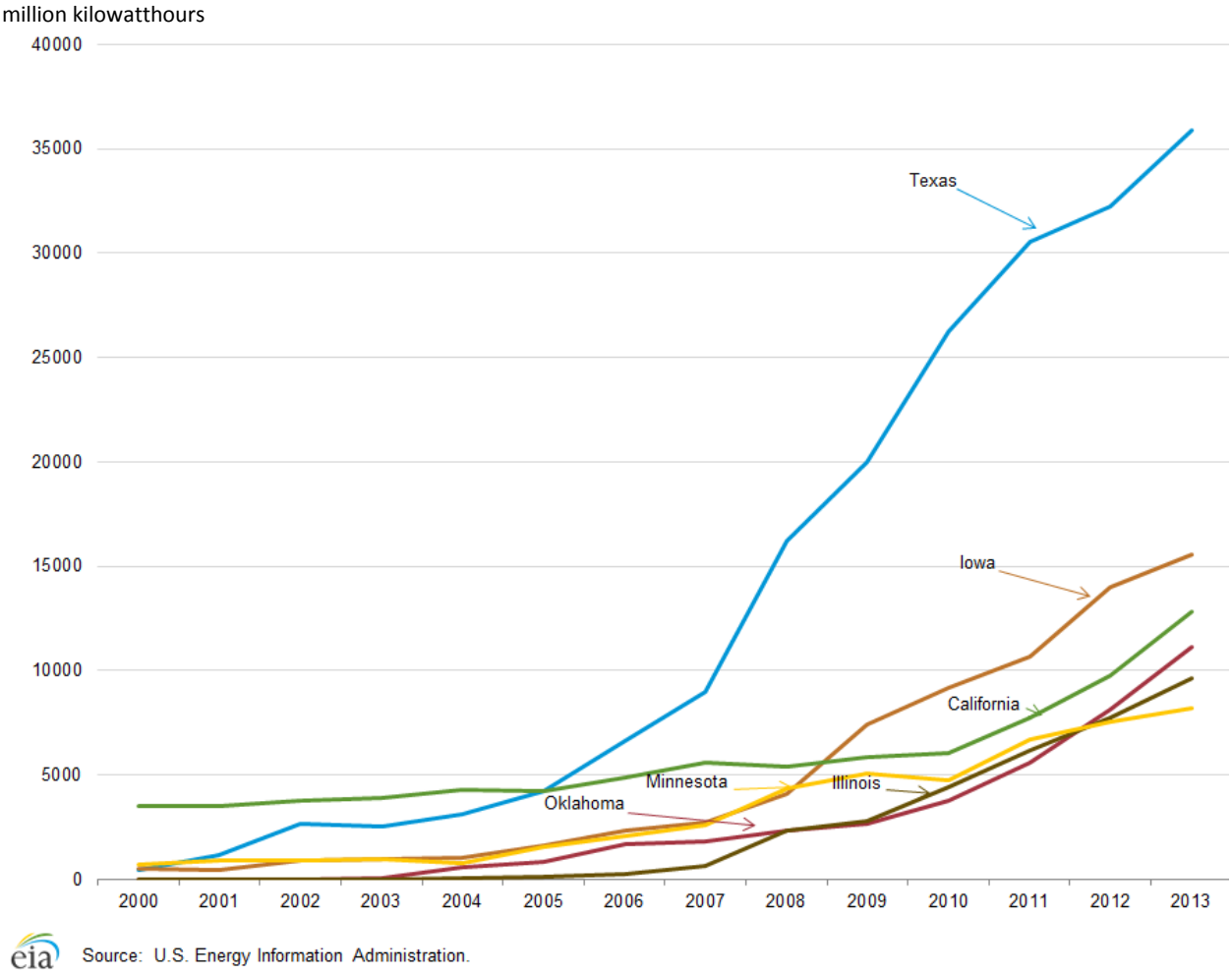
This analysis assigns all emissions related to the primary energy consumed for the production of electricity to the state where that electricity is produced rather than where it is consumed. As a result, the states that produce electricity from fossil fuels (especially coal) and sell that electricity across state lines tend to have higher per capita CO2 emissions than states that consume more electricity than they produce (Table 9). If the emissions associated with the generation of electricity were allocated to the states where that electricity is consumed, in many cases, the emissions profiles of both the producing and consuming states would be different.

Renewable energy

Historically, the primary non-carbon-producing energy forms have been nuclear and hydroelectric generation. Neither energy form has experienced significant capacity increases in the United States in recent years. On the other hand, non-hydropower renewable energy forms such as wind have experienced significant growth over the past decade. While California dominated wind generation in 2000 (Figure 3), the northern and southern plains have seen the fastest growth in recent years. In 2005, Texas and California generated about the same amount from wind, but in 2013 Texas generated almost three times the amount of electricity from wind as California, which has fallen to third behind Iowa. The concentration of wind generation is also spreading beyond the initial states. In 2000, the top four states

accounted for 93% of wind generation, but by 2013, even with the addition of Oklahoma and Illinois, the share of those six states had fallen to 56%. Oklahoma, which had no wind generation in 2002, was rapidly approaching California in wind generation by 2013. If Texas had generated the same amount of energy from a roughly equal mix of coal and natural gas as it did from wind in 2013, it would have produced about 22 million mt more in CO2 emissions, slightly more than Vermont's and New Hampshire's total emissions in 2013 combined. Other states are adding more solar from both utility-scale power stations, as well as distributed generation, to their energy mix. In 2013, California produced about 36% of the U.S. total of 305 trillion Btu and was the only state to produce significant energy from both wind and solar. Other leading solar energy states included Florida (16% of U.S. total), Arizona (12%), and New Jersey (8%).

Figure 3. Growth in wind generation among top six wind-generation states, 2000-2013



See Appendix B for other EIA state-related energy and environmental products.

Table 1. State energy-related carbon dioxide emissions by year (2000-2013)

million metric tons carbon dioxide

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
Alabama	142.1	133.5	138.3	139.1	141.3	142.9	145.1	146.5	138.9	119.4	131.8	128.9	122.2	119.8	-15.7%	-22.3
Alaska	44.3	43.4	43.5	43.6	46.7	48.0	45.7	43.9	39.3	37.7	38.5	38.4	37.8	36.1	-18.5%	-8.2
Arizona	86.0	88.3	87.6	89.4	96.2	96.3	99.2	100.9	101.2	92.2	93.9	91.9	89.9	93.8	9.1%	7.8
Arkansas	63.6	62.8	61.3	61.9	62.2	60.0	61.7	62.9	63.6	60.9	65.1	66.6	65.4	67.8	6.6%	4.2
California	381.8	386.2	384.8	372.3	390.1	387.2	393.8	397.2	379.7	365.3	358.4	344.8	349.6	353.1	-7.5%	-28.8
Colorado	84.5	92.6	90.6	90.0	92.9	95.1	95.8	98.2	96.5	92.3	94.7	91.0	89.9	90.5	7.1%	6.0
Connecticut	42.9	41.7	40.0	42.6	44.4	43.8	40.7	39.7	37.2	35.4	35.6	34.2	33.5	34.3	-20.0%	-8.6
Delaware	16.6	16.1	15.9	16.5	16.5	17.3	16.1	16.9	16.0	11.8	11.5	12.7	13.7	13.4	-19.5%	-3.2
District of Columbia	4.3	4.1	4.2	3.9	4.0	3.9	3.2	3.3	3.0	3.1	3.2	3.0	2.6	2.8	-35.0%	-1.5
Florida	239.5	238.2	241.2	245.1	256.1	259.4	257.0	253.8	235.2	220.5	237.8	224.7	218.4	217.6	-9.1%	-21.8
Georgia	169.0	161.2	165.9	168.8	173.8	184.2	181.2	183.3	170.5	160.4	169.5	154.2	134.0	132.5	-21.6%	-36.5
Hawaii	18.8	19.2	20.5	21.5	22.5	23.1	23.3	24.1	19.4	18.9	18.8	19.3	18.7	18.3	-2.7%	-0.5
Idaho	15.7	15.6	15.0	14.4	15.6	15.7	15.7	16.1	15.3	14.9	15.6	15.4	15.3	16.7	6.8%	1.1
Illinois	233.5	224.3	226.3	229.7	236.6	243.0	234.3	241.4	239.2	224.0	228.8	227.8	215.4	230.2	-1.4%	-3.3
Indiana	238.3	228.7	231.7	237.4	237.5	236.3	234.2	233.4	229.0	206.2	217.0	209.3	194.9	199.8	-16.2%	-38.5
Iowa	77.6	76.4	76.9	76.5	78.7	78.5	79.7	84.8	87.6	82.6	86.8	84.0	78.6	79.9	3.0%	2.4
Kansas	76.1	71.8	76.8	78.5	75.4	72.0	72.0	79.7	76.7	75.1	75.2	73.5	68.9	72.8	-4.4%	-3.4
Kentucky	145.8	149.1	149.3	145.1	151.5	153.6	156.4	156.2	153.5	143.3	150.1	148.2	137.5	137.0	-6.0%	-8.7
Louisiana	229.8	201.8	210.1	206.7	217.3	210.0	222.2	226.3	216.4	196.5	215.3	216.3	202.7	194.5	-15.4%	-35.3
Maine	22.3	22.5	24.0	23.6	23.9	23.0	21.1	20.7	18.8	18.1	17.7	17.2	15.5	16.2	-27.4%	-6.1
Maryland	77.3	77.8	77.6	80.3	81.3	83.1	76.5	76.6	72.7	69.2	67.7	63.0	58.4	57.9	-25.2%	-19.5
Massachusetts	82.4	82.2	83.0	84.3	82.5	84.0	75.8	78.9	75.6	69.1	70.4	66.6	60.3	65.3	-20.8%	-17.1
Michigan	193.8	189.5	188.9	186.0	188.2	189.9	178.2	180.3	173.5	162.3	163.2	158.0	151.3	160.2	-17.3%	-33.6
Minnesota	97.9	94.9	97.4	101.3	100.5	101.6	98.6	100.0	99.3	91.5	91.1	90.8	85.9	88.6	-9.5%	-9.3
Mississippi	61.5	70.2	62.7	64.2	65.7	63.9	65.9	67.8	64.3	60.2	64.9	60.1	61.9	60.2	-2.2%	-1.3
Missouri	125.9	131.4	132.1	138.9	140.0	142.8	141.1	139.6	136.2	129.8	133.6	133.8	126.3	131.3	4.3%	5.4
Montana	31.4	31.9	30.7	32.7	34.4	35.5	35.6	37.5	36.7	32.7	34.4	31.6	30.3	31.7	1.2%	0.4
Nebraska	41.6	42.9	42.3	43.4	43.2	43.6	44.1	44.3	46.3	46.9	49.4	51.8	50.1	53.0	27.6%	11.5
Nevada	45.3	44.6	41.4	43.5	47.6	49.7	41.2	41.3	40.4	38.9	36.9	33.2	33.9	35.8	-21.1%	-9.6
New Hampshire	17.5	16.9	17.6	20.9	21.8	21.2	19.2	18.9	18.5	16.7	16.2	15.8	14.2	14.0	-20.1%	-3.5
New Jersey	123.8	120.9	121.3	122.7	125.3	130.0	122.2	129.5	127.1	109.7	112.2	113.1	102.4	105.1	-15.1%	-18.7
New Mexico	58.1	58.3	55.3	57.5	58.5	59.1	59.6	58.7	56.8	57.7	53.8	56.2	54.2	53.9	-7.3%	-4.3
New York	212.4	207.6	201.5	211.8	214.2	210.7	191.8	197.7	187.7	171.3	171.5	162.0	158.6	160.3	-24.5%	-52.1
North Carolina	149.0	144.2	145.3	146.1	149.1	153.4	147.5	152.9	147.2	130.9	140.4	126.1	118.9	122.4	-17.8%	-26.6
North Dakota	50.8	51.7	51.3	50.9	49.5	52.4	50.6	52.4	52.7	51.2	52.0	53.5	55.8	56.6	11.3%	5.8
Ohio	266.0	256.2	262.1	269.7	264.1	271.0	263.7	268.4	261.5	236.3	246.9	235.1	215.2	228.7	-14.0%	-37.3
Oklahoma	100.2	101.5	101.7	103.8	99.7	106.8	109.9	108.9	111.4	105.7	105.3	107.0	104.2	103.1	2.9%	2.9

Table 1. State energy-related carbon dioxide emissions by year (2000-2013) (cont.)

million metric tons carbon dioxide

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
Oregon	41.3	40.6	39.1	39.5	40.5	40.9	39.9	43.2	42.2	40.2	39.9	36.4	36.1	38.4	-7.1%	-3.0
Pennsylvania	277.3	264.3	270.8	274.4	277.1	280.3	273.7	276.2	267.9	242.7	253.7	246.2	235.9	243.9	-12.1%	-33.5
Rhode Island	11.7	12.3	11.7	11.5	10.9	11.2	10.4	10.9	10.5	11.1	10.8	10.9	10.4	10.0	-14.8%	-1.7
South Carolina	81.6	79.9	81.2	81.7	89.1	87.6	88.0	87.9	85.4	80.2	83.1	78.9	72.5	69.2	-15.2%	-12.4
South Dakota	14.2	13.5	13.8	13.7	13.7	13.2	13.3	13.8	14.8	14.6	14.9	14.4	14.8	15.2	7.0%	1.0
Tennessee	127.9	126.6	125.6	123.8	125.6	126.9	128.9	127.8	121.3	101.0	108.2	104.7	98.3	96.7	-24.4%	-31.2
Texas	652.1	646.7	655.3	648.4	641.2	617.0	626.8	622.5	595.1	564.2	596.6	616.3	612.8	641.0	-1.7%	-11.1
Utah	65.1	63.0	62.2	62.9	65.3	66.9	68.1	70.0	69.1	64.3	63.4	63.9	61.2	66.4	1.9%	1.3
Vermont	6.7	6.6	6.3	6.6	7.0	6.8	6.6	6.4	5.8	6.0	5.7	5.7	5.3	5.6	-16.9%	-1.1
Virginia	122.9	120.6	119.0	123.1	126.8	128.6	121.7	126.5	115.1	103.9	106.6	97.7	95.6	103.0	-16.2%	-20.0
Washington	83.1	79.7	73.0	74.9	76.7	78.1	75.8	80.8	77.8	75.4	74.2	68.9	69.1	73.1	-12.0%	-10.0
West Virginia	114.9	104.8	117.6	114.1	111.2	113.3	113.5	115.6	111.3	89.2	99.4	96.7	91.1	93.3	-18.8%	-21.6
Wisconsin	108.0	105.8	107.0	104.9	107.2	110.5	102.5	103.9	104.2	95.1	97.2	96.4	89.2	99.5	-7.8%	-8.5
Wyoming	63.2	63.4	62.1	64.0	63.9	63.2	64.0	66.4	66.8	63.6	65.1	64.0	66.2	68.4	8.3%	5.3
Total[1]	5,837.3	5,727.6	5,760.5	5,807.6	5,904.7	5,936.1	5,853.0	5,934.9	5,732.0	5,309.9	5,493.8	5,359.9	5,144.6	5,278.6	-9.6%	-558.7

Source: U.S. Energy Information Administration (EIA), State Energy Data System and EIA calculations made for this analysis.

Note: The District of Columbia is included in the data tables, but not in the analysis as it is not a state.

[1]For the United States as a whole see EIA, Monthly Energy Review, Section 12: Environment. Differing methodologies the total for all states to be different from the national-level estimate. See Appendix A. for details on the data series differences.

Table 2. 2013 state energy-related carbon dioxide emissions by fuel

	million metric tons of carbon dioxide				Shares		
State	Coal	Petroleum	Natural Gas	Total	Coal	Petroleum	Natural Gas
Alabama	53.3	33.2	33.4	119.8	44.5%	27.7%	27.8%
Alaska	1.4	17.1	17.7	36.1	3.9%	47.2%	48.9%
Arizona	43.0	32.8	18.1	93.8	45.8%	34.9%	19.3%
Arkansas	30.9	21.6	15.3	67.8	45.5%	31.9%	22.5%
California	3.6	217.7	131.8	353.1	1.0%	61.7%	37.3%
Colorado	34.3	30.6	25.6	90.5	37.9%	33.8%	28.2%
Connecticut	0.7	20.8	12.7	34.3	2.1%	60.7%	37.1%
Delaware	1.7	6.3	5.3	13.4	12.8%	47.2%	39.9%
District of Columbia	0.0	1.0	1.8	2.8	0.0%	35.5%	64.5%
Florida	47.7	103.9	66.1	217.6	21.9%	47.7%	30.4%
Georgia	40.2	58.6	33.7	132.5	30.4%	44.2%	25.4%
Hawaii	1.4	16.8	0.0	18.3	7.9%	92.0%	0.1%
Idaho	0.8	10.3	5.7	16.7	4.5%	61.6%	34.0%
Illinois	96.9	76.9	56.4	230.2	42.1%	33.4%	24.5%
Indiana	112.8	50.9	36.1	199.8	56.5%	25.5%	18.1%
Iowa	38.0	25.7	16.3	79.9	47.5%	32.2%	20.3%
Kansas	30.9	26.6	15.3	72.8	42.4%	36.5%	21.1%
Kentucky	86.4	38.1	12.5	137.0	63.0%	27.8%	9.1%
Louisiana	21.5	95.9	77.0	194.5	11.1%	49.3%	39.6%
Maine	0.2	12.6	3.5	16.2	1.0%	77.4%	21.6%
Maryland	17.3	29.6	11.0	57.9	29.9%	51.2%	18.9%
Massachusetts	4.0	37.2	24.1	65.3	6.1%	57.0%	36.9%
Michigan	62.1	54.0	44.2	160.2	38.7%	33.7%	27.6%
Minnesota	25.3	38.0	25.4	88.6	28.5%	42.8%	28.7%
Mississippi	9.2	28.2	22.7	60.2	15.3%	46.9%	37.8%
Missouri	76.2	40.2	14.9	131.3	58.0%	30.6%	11.4%
Montana	15.7	11.7	4.4	31.7	49.4%	36.8%	13.8%
Nebraska	27.7	15.9	9.5	53.0	52.2%	29.9%	18.0%
Nevada	6.1	14.7	15.0	35.8	17.1%	41.0%	41.9%
New Hampshire	1.6	9.4	3.0	14.0	11.3%	67.5%	21.1%
New Jersey	2.5	64.9	37.8	105.1	2.3%	61.7%	36.0%
New Mexico	24.2	16.2	13.4	53.9	44.9%	30.1%	24.9%
New York	6.5	83.7	70.1	160.3	4.0%	52.2%	43.7%
North Carolina	46.6	52.1	23.6	122.4	38.1%	42.6%	19.3%
North Dakota	37.1	15.1	4.5	56.6	65.5%	26.6%	7.9%
Ohio	104.1	74.4	50.2	228.7	45.5%	32.6%	21.9%
Oklahoma	31.7	35.1	36.3	103.1	30.8%	34.1%	35.2%

Table 2. 2013 state energy-related carbon dioxide emissions by fuel (cont.)

	million metric tons of carbon dioxide				Shares		
State	Coal	Petroleum	Natural Gas	Total	Coal	Petroleum	Natural Gas
Oregon	3.7	21.8	13.0	38.4	9.6%	56.7%	33.8%
Pennsylvania	105.9	77.1	60.8	243.9	43.4%	31.6%	24.9%
Rhode Island	0.0	5.3	4.7	10.0	0.0%	52.9%	47.1%
South Carolina	24.3	32.3	12.6	69.2	35.1%	46.7%	18.2%
South Dakota	3.2	7.4	4.5	15.2	21.3%	49.1%	29.6%
Tennessee	37.7	43.8	15.2	96.7	39.0%	45.3%	15.7%
Texas	150.8	280.9	209.2	641.0	23.5%	43.8%	32.6%
Utah	33.5	19.1	13.7	66.4	50.5%	28.8%	20.7%
Vermont	0.0	5.1	0.5	5.6	0.0%	90.9%	9.3%
Virginia	27.4	52.6	23.0	103.0	26.6%	51.1%	22.3%
Washington	7.1	48.7	17.4	73.1	9.7%	66.5%	23.8%
West Virginia	72.8	12.5	8.0	93.3	78.0%	13.4%	8.6%
Wisconsin	42.9	32.7	23.9	99.5	43.1%	32.9%	24.0%
Wyoming	49.2	11.0	8.3	68.4	71.9%	16.0%	12.1%
Total[1]	1,701.7	2,167.9	1,409.0	5,278.6	32.2%	41.1%	26.7%

Source: U.S. Energy Information Administration (EIA), State Energy Data System and EIA calculations made for this analysis.
Note: The District of Columbia is included in the data tables, but not in the analysis as it is not a state.
1For the United States as a whole see EIA, Monthly Energy Review, Section 12: Environment. Differing methodologies between the two data series causes the total for all states to be slightly different from the national-level estimate. See Appendix A for details on the data series differences.

Table 3. 2013 state energy-related carbon dioxide emissions by sector

million metric tons carbon dioxide

State	Commercial	Electric Power	Residential	Industrial	Transportation	Total
Alabama	1.8	64.2	2.2	21.3	30.3	119.8
Alaska	2.4	2.6	1.6	17.5	12.0	36.1
Arizona	2.4	54.7	2.4	4.5	29.8	93.8
Arkansas	2.8	35.5	2.2	9.3	18.0	67.8
California	16.0	45.7	27.7	72.9	190.8	353.1
Colorado	3.7	38.6	8.2	13.9	26.3	90.5
Connecticut	3.6	6.8	7.2	2.3	14.4	34.3
Delaware	0.8	4.1	0.9	3.7	3.9	13.4
District of Columbia	1.0	0.0	0.8	0.0	1.0	2.8
Florida	5.1	104.6	1.2	11.0	95.8	217.6
Georgia	4.0	53.6	7.1	14.4	53.5	132.5
Hawaii	0.3	6.8	0.1	1.5	9.6	18.3
Idaho	1.3	1.3	1.9	3.5	8.8	16.7
Illinois	13.5	89.0	25.8	40.3	61.6	230.2
Indiana	5.4	98.4	8.7	46.4	40.9	199.8
Iowa	4.5	32.2	4.8	18.9	19.6	79.9
Kansas	2.0	32.0	4.2	15.8	18.8	72.8
Kentucky	2.4	86.1	3.4	16.2	29.0	137.0
Louisiana	1.8	40.8	2.2	105.4	44.4	194.5
Maine	1.6	1.4	2.4	2.4	8.4	16.2
Maryland	4.7	17.4	6.2	2.6	27.0	57.9
Massachusetts	6.2	12.6	13.6	3.8	29.1	65.3
Michigan	10.3	62.1	20.7	20.5	46.7	160.2
Minnesota	6.7	25.7	9.3	18.3	28.7	88.6
Mississippi	1.4	21.6	1.7	11.3	24.1	60.2
Missouri	4.3	75.8	6.7	9.1	35.5	131.3
Montana	1.3	16.4	1.6	4.7	7.8	31.7
Nebraska	2.0	26.0	2.7	9.3	13.0	53.0
Nevada	1.9	15.4	2.5	2.4	13.6	35.8
New Hampshire	1.3	3.3	2.3	0.8	6.3	14.0
New Jersey	10.5	14.4	14.7	9.7	55.8	105.1
New Mexico	1.7	28.2	2.3	8.4	13.3	53.9

Table 3. 2013 state energy-related carbon dioxide emissions by sector (cont.)

million metric tons carbon dioxide

State	Commercial	Electric Power	Residential	Industrial	Transportation	Total
New York	22.6	30.0	31.9	9.5	66.2	160.3
North Carolina	4.3	55.5	5.2	10.7	46.7	122.4
North Dakota	1.5	28.7	1.1	16.1	9.2	56.6
Ohio	10.9	101.6	18.0	38.3	59.9	228.7
Oklahoma	2.8	44.2	4.1	22.2	29.8	103.1
Oregon	1.8	9.0	2.8	4.7	20.0	38.4
Pennsylvania	10.1	105.9	19.7	49.6	58.6	243.9
Rhode Island	0.9	2.6	2.2	0.6	3.7	10.0
South Carolina	1.7	28.2	1.9	7.9	29.5	69.2
South Dakota	0.8	3.1	1.1	3.9	6.2	15.2
Tennessee	3.5	33.6	4.2	16.5	38.9	96.7
Texas	11.5	226.2	12.4	189.1	201.8	641.0
Utah	2.7	34.9	4.1	8.3	16.5	66.4
Vermont	0.8	0.0	1.3	0.4	3.2	5.6
Virginia	4.9	30.9	6.5	12.9	47.8	103.0
Washington	3.8	11.7	5.3	12.6	39.8	73.1
West Virginia	1.6	68.7	1.9	10.4	10.7	93.3
Wisconsin	5.8	43.3	9.8	14.0	26.7	99.5
Wyoming	1.1	46.2	1.0	12.6	7.6	68.4
Total[1]	221.5	2,021.6	333.2	962.1	1,740.3	5,278.6

Source: U.S. Energy Information Administration (EIA), State Energy Data System and EIA calculations made for this analysis.
Note: The District of Columbia is included in the data tables, but not in the analysis as it is not a state.
[1]For the United States as a whole see EIA, Monthly Energy Review, Section 12: Environment. Differing methodologies between the two data series causes the total for all states to be different from the national-level estimate. See Appendix A. for details on the data series differences.

Table 4. 2013 state energy-related carbon dioxide emission shares by sector

percent of total

	Shares				
State	Commercial	Electric Power	Residential	Industrial	Transportation
Alabama	1.5%	53.6%	1.8%	17.8%	25.3%
Alaska	6.6%	7.3%	4.3%	48.4%	33.3%
Arizona	2.5%	58.3%	2.6%	4.8%	31.8%
Arkansas	4.2%	52.4%	3.3%	13.6%	26.5%
California	4.5%	12.9%	7.9%	20.7%	54.0%
Colorado	4.1%	42.6%	9.0%	15.3%	29.0%
Connecticut	10.4%	19.8%	21.0%	6.8%	42.1%
Delaware	5.7%	30.2%	7.0%	27.8%	29.3%
District of Columbia	35.5%	0.0%	28.0%	0.7%	35.8%
Florida	2.4%	48.1%	0.5%	5.0%	44.0%
Georgia	3.0%	40.5%	5.3%	10.8%	40.4%
Hawaii	1.4%	37.0%	0.3%	8.3%	52.8%
Idaho	7.5%	7.9%	11.1%	20.8%	52.7%
Illinois	5.8%	38.7%	11.2%	17.5%	26.8%
Indiana	2.7%	49.3%	4.4%	23.2%	20.5%
Iowa	5.7%	40.2%	6.0%	23.7%	24.5%
Kansas	2.7%	44.0%	5.7%	21.7%	25.9%
Kentucky	1.7%	62.8%	2.5%	11.8%	21.1%
Louisiana	0.9%	21.0%	1.1%	54.2%	22.8%
Maine	10.0%	8.9%	14.7%	14.8%	51.5%
Maryland	8.1%	30.0%	10.7%	4.4%	46.7%
Massachusetts	9.6%	19.3%	20.8%	5.8%	44.6%
Michigan	6.4%	38.8%	12.9%	12.8%	29.1%
Minnesota	7.6%	29.0%	10.4%	20.6%	32.4%
Mississippi	2.4%	35.9%	2.8%	18.8%	40.0%
Missouri	3.2%	57.7%	5.1%	7.0%	27.0%
Montana	4.0%	51.8%	4.9%	14.7%	24.6%
Nebraska	3.7%	49.1%	5.1%	17.5%	24.6%
Nevada	5.4%	43.0%	6.9%	6.7%	38.1%
New Hampshire	9.2%	23.5%	16.4%	5.7%	45.2%
New Jersey	10.0%	13.7%	14.0%	9.2%	53.1%
New Mexico	3.1%	52.4%	4.3%	15.6%	24.6%

Table 4. 2013 state energy-related carbon dioxide emission shares by sector (cont.)

percent of total

	Shares				
State	Commercial	Electric Power	Residential	Industrial	Transportation
New York	14.1%	18.7%	19.9%	5.9%	41.3%
North Carolina	3.5%	45.4%	4.2%	8.8%	38.2%
North Dakota	2.7%	50.7%	1.9%	28.4%	16.3%
Ohio	4.8%	44.4%	7.9%	16.8%	26.2%
Oklahoma	2.7%	42.9%	4.0%	21.5%	28.9%
Oregon	4.8%	23.6%	7.2%	12.3%	52.1%
Pennsylvania	4.1%	43.4%	8.1%	20.3%	24.0%
Rhode Island	9.1%	25.8%	22.4%	5.7%	37.1%
South Carolina	2.4%	40.8%	2.7%	11.5%	42.7%
South Dakota	5.2%	20.7%	7.3%	25.9%	41.0%
Tennessee	3.6%	34.7%	4.4%	17.1%	40.2%
Texas	1.8%	35.3%	1.9%	29.5%	31.5%
Utah	4.1%	52.6%	6.1%	12.5%	24.8%
Vermont	13.6%	0.2%	22.7%	7.1%	56.4%
Virginia	4.8%	30.0%	6.3%	12.5%	46.4%
Washington	5.2%	15.9%	7.2%	17.2%	54.5%
West Virginia	1.7%	73.7%	2.0%	11.1%	11.5%
Wisconsin	5.8%	43.5%	9.8%	14.1%	26.8%
Wyoming	1.6%	67.6%	1.4%	18.4%	11.0%
Average all states	4.2%	38.3%	6.3%	18.2%	33.0%

Note: The District of Columbia is included in the data tables, but not in the analysis as it is not a state.
Source: U.S. Energy Information Administration, State Energy Data System and EIA calculations made for this analysis.

Table 5. Per capita energy-related carbon dioxide emissions by state (2000-2013)

metric tons carbon dioxide per person

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
Alabama	31.9	29.9	30.9	30.9	31.2	31.3	31.3	31.4	29.4	25.1	27.5	26.9	25.4	24.8	-22.4%	-7.1
Alaska	70.6	68.4	67.8	67.3	70.9	72.0	67.7	64.6	57.2	53.9	53.9	53.1	51.8	49.0	-30.6%	-21.6
Arizona	16.7	16.7	16.2	16.2	17.0	16.5	16.5	16.4	16.1	14.5	14.6	14.2	13.7	14.1	-15.2%	-2.5
Arkansas	23.8	23.3	22.6	22.7	22.6	21.6	21.9	22.1	22.1	21.0	22.3	22.7	22.2	22.9	-3.5%	-0.8
California	11.2	11.2	11.0	10.6	11.0	10.8	10.9	11.0	10.4	9.9	9.6	9.1	9.2	9.2	-18.2%	-2.0
Colorado	19.5	20.9	20.2	19.9	20.3	20.5	20.3	20.4	19.7	18.6	18.8	17.8	17.3	17.2	-12.1%	-2.4
Connecticut	12.6	12.1	11.6	12.2	12.7	12.5	11.6	11.3	10.5	9.9	9.9	9.5	9.3	9.5	-24.2%	-3.0
Delaware	21.2	20.2	19.7	20.1	19.9	20.5	18.8	19.4	18.1	13.2	12.8	14.0	14.9	14.5	-31.6%	-6.7
District of Columbia	7.5	7.1	7.3	6.9	7.0	6.9	5.5	5.8	5.2	5.3	5.2	4.9	4.1	4.3	-42.6%	-3.2
Florida	14.9	14.6	14.5	14.4	14.7	14.5	14.1	13.8	12.7	11.8	12.6	11.8	11.3	11.1	-25.6%	-3.8
Georgia	20.5	19.2	19.5	19.6	19.8	20.6	19.8	19.6	17.9	16.7	17.4	15.7	13.5	13.3	-35.5%	-7.3
Hawaii	15.5	15.7	16.5	17.2	17.7	17.9	17.8	18.3	14.5	14.0	13.8	14.0	13.4	12.9	-16.2%	-2.5
Idaho	12.1	11.8	11.2	10.5	11.2	11.0	10.7	10.7	10.0	9.6	9.9	9.7	9.6	10.4	-14.0%	-1.7
Illinois	18.8	18.0	18.1	18.3	18.8	19.3	18.5	19.0	18.8	17.5	17.8	17.7	16.7	17.9	-4.9%	-0.9
Indiana	39.1	37.3	37.6	38.3	38.1	37.6	37.0	36.6	35.6	31.9	33.4	32.1	29.8	30.4	-22.3%	-8.7
Iowa	26.5	26.1	26.2	26.0	26.6	26.5	26.7	28.3	29.0	27.2	28.5	27.4	25.5	25.8	-2.4%	-0.6
Kansas	28.3	26.6	28.3	28.8	27.6	26.2	26.1	28.6	27.3	26.5	26.3	25.6	23.9	25.1	-11.1%	-3.1
Kentucky	36.0	36.7	36.5	35.3	36.5	36.7	37.1	36.7	35.8	33.2	34.5	33.9	31.4	31.1	-13.5%	-4.9
Louisiana	51.4	45.1	46.7	45.7	47.7	45.9	51.6	51.7	48.8	43.7	47.4	47.3	44.0	42.0	-18.2%	-9.4
Maine	17.5	17.5	18.5	18.0	18.2	17.5	15.9	15.6	14.1	13.6	13.4	13.0	11.7	12.2	-30.2%	-5.3
Maryland	14.6	14.5	14.3	14.6	14.7	14.9	13.6	13.5	12.8	12.1	11.7	10.8	9.9	9.7	-33.1%	-4.8
Massachusetts	13.0	12.9	12.9	13.1	12.9	13.1	11.8	12.3	11.7	10.6	10.7	10.1	9.1	9.7	-24.9%	-3.2
Michigan	19.5	19.0	18.9	18.5	18.7	18.9	17.8	18.0	17.4	16.4	16.5	16.0	15.3	16.2	-16.9%	-3.3
Minnesota	19.8	19.0	19.4	20.0	19.8	19.8	19.1	19.2	18.9	17.3	17.2	17.0	16.0	16.3	-17.6%	-3.5
Mississippi	21.6	24.6	21.9	22.4	22.7	22.0	22.7	23.2	21.8	20.3	21.9	20.2	20.7	20.1	-6.9%	-1.5
Missouri	22.4	23.3	23.3	24.3	24.3	24.7	24.1	23.7	23.0	21.8	22.3	22.3	21.0	21.7	-3.2%	-0.7
Montana	34.7	35.2	33.6	35.6	37.0	37.7	37.4	38.8	37.6	33.3	34.7	31.6	30.1	31.3	-9.9%	-3.4
Nebraska	24.2	24.9	24.5	24.9	24.7	24.7	24.9	24.9	25.8	25.9	27.0	28.1	27.0	28.4	17.0%	4.1
Nevada	22.5	21.3	19.0	19.3	20.3	20.4	16.3	15.9	15.2	14.5	13.7	12.2	12.3	12.8	-42.9%	-9.6
New Hampshire	14.1	13.5	13.9	16.3	16.9	16.3	14.7	14.4	14.0	12.7	12.3	12.0	10.7	10.5	-25.1%	-3.5
New Jersey	14.7	14.2	14.2	14.3	14.5	15.0	14.1	14.9	14.6	12.5	12.7	12.8	11.5	11.8	-19.7%	-2.9
New Mexico	31.9	31.8	29.8	30.6	30.7	30.6	30.4	29.5	28.3	28.3	26.1	27.0	26.0	25.8	-19.1%	-6.1
New York	11.2	10.9	10.5	11.0	11.2	11.0	10.0	10.3	9.8	8.9	8.8	8.3	8.1	8.1	-27.2%	-3.0
North Carolina	18.4	17.6	17.5	17.3	17.4	17.6	16.5	16.8	15.8	13.9	14.7	13.1	12.2	12.4	-32.6%	-6.0
North Dakota	79.2	80.9	80.5	79.7	76.7	81.1	78.0	80.2	80.1	77.0	77.1	78.1	79.5	78.2	-1.3%	-1.0
Ohio	23.4	22.5	23.0	23.6	23.1	23.6	23.0	23.3	22.7	20.5	21.4	20.4	18.6	19.8	-15.6%	-3.6
Oklahoma	29.0	29.3	29.1	29.6	28.3	30.1	30.6	30.0	30.4	28.4	28.0	28.3	27.3	26.8	-7.7%	-2.2

Table 5. Per capita energy-related carbon dioxide emissions by state (2000-2013) (cont.)

metric tons carbon dioxide per person

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
Oregon	12.0	11.7	11.1	11.1	11.4	11.3	10.9	11.6	11.2	10.5	10.4	9.4	9.3	9.8	-18.9%	-2.3
Pennsylvania	22.6	21.5	22.0	22.2	22.3	22.5	21.9	22.0	21.2	19.2	20.0	19.3	18.5	19.1	-15.5%	-3.5
Rhode Island	11.2	11.6	11.0	10.7	10.1	10.4	9.8	10.3	10.0	10.5	10.3	10.3	9.8	9.5	-15.1%	-1.7
South Carolina	20.3	19.7	19.8	19.7	21.2	20.5	20.2	19.8	18.9	17.5	17.9	16.9	15.3	14.5	-28.5%	-5.8
South Dakota	18.7	17.8	18.1	17.9	17.8	17.1	17.0	17.4	18.6	18.0	18.2	17.5	17.7	17.9	-4.4%	-0.8
Tennessee	22.4	22.0	21.7	21.2	21.2	21.2	21.2	20.7	19.4	16.0	17.0	16.4	15.2	14.9	-33.6%	-7.5
Texas	31.1	30.3	30.2	29.4	28.6	27.1	26.8	26.1	24.5	22.7	23.6	24.0	23.5	24.2	-22.3%	-7.0
Utah	29.0	27.6	26.7	26.6	27.2	27.2	27.0	26.9	25.9	23.6	22.9	22.7	21.4	22.9	-21.2%	-6.1
Vermont	11.0	10.8	10.3	10.6	11.3	10.9	10.6	10.3	9.3	9.6	9.1	9.0	8.5	8.9	-19.1%	-2.1
Virginia	17.3	16.8	16.3	16.7	17.0	17.0	15.9	16.3	14.7	13.1	13.3	12.0	11.7	12.5	-28.0%	-4.8
Washington	14.1	13.3	12.1	12.3	12.4	12.5	11.9	12.5	11.8	11.3	11.0	10.1	10.0	10.5	-25.4%	-3.6
West Virginia	63.6	58.2	65.1	63.0	61.3	62.2	62.1	63.0	60.5	48.2	53.6	52.1	49.1	50.3	-20.9%	-13.3
Wisconsin	20.1	19.6	19.6	19.1	19.4	19.9	18.4	18.5	18.5	16.8	17.1	16.9	15.6	17.3	-13.8%	-2.8
Wyoming	127.8	128.1	124.2	127.2	125.5	123.0	122.4	124.1	122.3	113.6	115.4	112.6	114.8	117.3	-8.2%	-10.5
Average all states	20.7	20.1	20.0	20.0	20.2	20.1	19.6	19.7	18.8	17.3	17.8	17.2	16.4	16.7	-19.4%	-4.0

Note: The District of Columbia is included in the data tables, but not in the analysis as it is not a state.

Source: U.S. Energy Information Administration, State Energy Data System and EIA calculations made for this analysis.

Table 6. Energy intensity by state (2000-2013)

thousand Btu per chained 2009 dollar of GDP

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
Alabama	16.2	15.1	15.3	15.1	14.7	14.3	14.3	14.3	14.1	13.7	14.1	14.1	13.8	13.5	-16.4%	-2.6
Alaska	20.4	19.4	18.8	19.0	19.2	19.3	17.0	15.6	14.0	12.7	13.2	12.8	12.4	12.3	-39.7%	-8.1
Arizona	7.7	7.6	7.5	7.1	7.4	6.8	6.5	6.6	6.9	7.0	7.0	6.8	6.7	6.8	-12.4%	-1.0
Arkansas	12.9	12.9	12.7	12.2	11.7	10.9	10.9	11.2	11.0	11.2	11.4	11.2	11.1	10.7	-17.1%	-2.2
California	4.4	4.3	4.2	4.0	4.0	3.9	3.8	3.7	3.6	3.6	3.6	3.5	3.4	3.3	-23.5%	-1.0
Colorado	5.6	6.1	5.9	5.8	5.9	5.8	5.7	5.9	5.8	5.7	5.7	5.5	5.3	5.3	-4.6%	-0.3
Connecticut	3.5	3.3	3.2	3.4	3.4	3.4	3.3	4.1	3.8	3.8	3.9	3.9	3.7	3.4	-4.0%	-0.1
Delaware	4.6	4.5	4.6	4.5	4.2	4.3	3.9	4.1	4.2	3.2	3.2	3.6	4.1	4.0	-14.7%	-0.7
District of Columbia	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.5	-45.3%	-0.4
Florida	6.1	5.9	5.8	5.7	5.6	5.3	5.2	5.1	5.1	5.3	5.6	5.4	5.2	5.2	-15.7%	-1.0
Georgia	7.5	7.1	7.4	7.2	7.3	7.2	7.0	7.0	6.7	6.8	7.1	6.6	6.1	6.0	-20.2%	-1.5
Hawaii	5.1	5.1	5.2	5.3	5.2	5.1	5.0	5.1	4.1	4.2	4.1	4.2	4.0	4.0	-22.6%	-1.2
Idaho	8.7	8.0	7.9	7.1	7.3	7.1	7.3	6.8	6.8	7.0	7.0	7.8	7.4	7.4	-15.6%	-1.4
Illinois	7.1	6.9	7.0	7.0	6.9	6.9	6.6	6.7	6.9	6.8	6.8	6.7	6.4	6.7	-5.0%	-0.4
Indiana	12.2	11.9	11.9	11.8	11.3	11.3	10.9	10.7	10.6	10.4	10.4	10.2	9.6	9.7	-20.7%	-2.5
Iowa	10.1	9.9	9.9	9.4	9.2	9.2	9.3	9.7	10.5	10.7	11.1	10.8	10.3	10.0	-0.5%	-0.1
Kansas	10.9	10.4	10.7	10.7	10.4	9.4	9.2	9.8	9.4	9.8	9.7	9.0	8.7	9.4	-13.3%	-1.4
Kentucky	12.9	13.2	13.0	12.4	12.7	12.5	12.2	12.4	12.1	12.0	11.9	11.6	10.7	10.6	-17.5%	-2.3
Louisiana	23.9	20.8	21.3	19.7	20.0	18.2	19.2	20.2	19.0	17.3	18.0	18.7	17.6	17.6	-26.2%	-6.3
Maine	10.7	10.5	10.6	9.9	9.9	9.9	9.1	9.2	9.2	8.6	8.5	8.6	7.6	8.4	-21.2%	-2.3
Maryland	5.3	4.9	4.7	4.8	4.7	4.6	4.2	4.2	4.1	4.0	3.8	3.6	3.4	3.4	-35.3%	-1.9
Massachusetts	3.9	3.8	3.8	3.8	3.6	3.6	3.3	3.3	3.3	3.2	3.2	3.0	2.8	2.8	-26.9%	-1.0
Michigan	7.3	7.5	7.4	7.1	7.3	7.3	6.9	7.2	7.3	7.3	7.2	7.1	6.7	6.9	-5.5%	-0.4
Minnesota	7.0	6.8	6.8	6.6	6.5	6.5	6.4	6.5	6.6	6.5	6.4	6.2	6.0	6.0	-14.8%	-1.0
Mississippi	13.2	14.3	13.1	12.6	12.7	12.3	12.4	12.5	11.7	11.8	12.5	12.0	12.0	11.8	-10.6%	-1.4
Missouri	7.6	7.9	7.9	8.1	7.9	8.0	7.8	7.8	7.7	7.6	7.6	7.6	7.2	7.3	-4.0%	-0.3
Montana	18.2	16.6	16.9	16.5	16.7	16.8	16.8	16.5	16.4	15.3	15.3	14.8	13.7	13.8	-24.5%	-4.5
Nebraska	9.6	9.6	9.6	8.9	9.1	8.8	8.7	9.1	9.4	9.4	10.0	9.7	9.1	9.3	-3.1%	-0.3
Nevada	6.8	6.6	6.0	6.0	5.9	5.7	5.0	4.9	5.1	5.5	5.3	4.9	5.1	5.4	-21.4%	-1.5
New Hampshire	6.8	6.6	6.6	7.3	7.6	7.3	6.6	6.9	6.8	6.5	6.5	6.1	5.6	6.0	-12.9%	-0.9
New Jersey	5.0	4.9	4.9	4.7	4.6	4.7	4.5	4.7	4.6	4.5	4.5	4.6	4.2	4.3	-15.2%	-0.8
New Mexico	11.6	11.4	10.6	10.6	10.2	10.3	10.4	10.5	10.2	10.2	9.7	10.1	9.8	9.7	-16.3%	-1.9
New York	4.0	3.8	3.7	3.8	3.8	3.6	3.3	3.4	3.4	3.1	3.0	2.9	2.8	2.9	-28.1%	-1.1
North Carolina	7.3	6.9	6.9	6.9	6.7	6.5	6.0	6.1	6.0	5.7	5.9	5.5	5.3	5.5	-24.9%	-1.8
North Dakota	20.7	20.1	17.4	27.7	27.6	25.9	24.0	23.5	24.1	22.5	22.7	21.3	20.9	17.6	-14.9%	-3.1
Ohio	8.1	7.8	7.6	7.6	7.4	7.5	7.3	7.5	7.5	7.2	7.4	6.9	6.5	6.7	-17.0%	-1.4
Oklahoma	12.6	12.4	12.3	12.3	11.8	12.2	11.9	11.9	11.8	11.5	11.5	11.3	10.9	10.8	-14.3%	-1.8

Table 6. Energy intensity by state (2000-2013) (cont.)

thousand Btu per chained 2009 dollar of GDP

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
Oregon	7.6	7.7	7.3	6.9	6.6	6.4	6.3	6.0	5.9	5.4	5.5	5.4	8.3	5.5	-27.8%	-2.1
Pennsylvania	8.8	8.3	8.4	8.3	8.3	8.2	7.9	8.0	7.9	7.6	7.7	7.5	7.3	7.5	-14.4%	-1.3
Rhode Island	4.6	4.6	4.2	3.9	3.6	3.7	3.4	3.7	3.9	4.0	3.9	3.9	3.7	3.4	-25.1%	-1.2
South Carolina	11.6	11.1	11.4	10.9	11.5	11.3	10.9	10.8	10.6	10.8	10.9	10.5	10.0	9.9	-14.5%	-1.7
South Dakota	9.9	8.3	8.1	8.1	7.9	7.8	8.0	7.9	8.3	8.8	9.4	9.5	9.4	9.1	-7.7%	-0.8
Tennessee	9.3	9.3	9.0	8.7	8.5	8.5	8.2	8.3	7.9	7.4	7.7	7.4	6.7	6.9	-25.8%	-2.4
Texas	13.1	12.6	12.7	12.4	12.0	11.2	10.2	9.8	9.5	9.9	9.8	9.3	9.2	10.7	-18.9%	-2.5
Utah	9.8	9.2	8.9	8.9	8.8	8.5	8.2	7.9	8.0	7.7	7.5	7.5	7.1	7.4	-24.7%	-2.4
Vermont	8.2	7.4	7.0	7.0	6.8	6.7	7.2	6.7	6.7	7.5	6.7	6.6	7.4	7.9	-3.6%	-0.3
Virginia	6.1	5.7	5.7	5.6	5.7	5.5	5.2	5.3	5.0	4.7	4.6	4.3	4.4	4.6	-25.1%	-1.5
Washington	7.5	6.6	6.9	6.6	6.6	6.3	6.4	6.1	5.9	5.8	5.6	6.0	5.8	5.6	-25.4%	-1.9
West Virginia	23.5	21.7	23.9	23.0	22.1	22.0	21.7	22.1	21.0	17.5	18.7	17.9	17.7	18.0	-23.3%	-5.5
Wisconsin	7.7	7.6	7.4	7.2	7.0	7.1	6.7	6.8	6.9	6.6	6.6	6.4	6.1	6.4	-17.2%	-1.3
Wyoming	31.1	29.5	28.5	28.6	27.4	26.2	23.7	23.6	22.0	21.6	22.7	22.8	24.5	24.9	-19.9%	-6.2
Average all states	7.9	7.6	7.6	7.4	7.3	7.0	6.8	6.8	6.7	6.5	6.6	6.4	6.1	6.2	-21.4%	-1.7

Note: The District of Columbia is included in the data tables, but not in the analysis as it is not a state.

Source: U.S. Energy Information Administration, State Energy Data System and EIA calculations made for this analysis.

Table 7. Carbon intensity by state (2000-2013)

kilograms of energy-related carbon dioxide per million Btu

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
Alabama	58.6	58.2	58.0	57.7	57.0	57.8	58.0	58.3	56.1	51.4	53.7	52.1	50.2	49.0	-16.5%	-9.6
Alaska	59.7	59.0	59.4	59.4	60.3	60.2	61.2	60.8	60.4	59.8	60.1	60.0	59.5	59.3	-0.7%	-0.4
Arizona	55.0	56.0	54.8	55.8	56.1	56.9	57.5	56.3	55.3	54.1	54.7	53.8	52.9	53.9	-2.0%	-1.1
Arkansas	57.2	56.7	54.7	55.0	55.4	55.6	55.3	54.7	55.5	53.7	54.6	55.6	54.8	57.5	0.5%	0.3
California	52.9	54.0	53.8	52.7	53.5	52.8	52.7	53.4	53.2	52.5	51.4	49.8	51.8	51.4	-2.8%	-1.5
Colorado	69.0	68.6	69.2	68.3	68.7	68.3	68.3	67.0	65.9	64.9	65.6	64.3	64.5	63.4	-8.1%	-5.6
Connecticut	50.1	51.9	51.0	51.0	50.4	51.4	49.2	48.8	48.8	45.7	45.7	44.5	44.1	44.3	-11.6%	-5.8
Delaware	71.2	69.8	69.0	70.7	71.1	71.4	70.8	71.0	69.8	65.7	64.0	61.3	60.5	60.5	-15.1%	-10.8
District of Columbia	60.9	62.0	61.1	60.5	60.9	61.3	59.5	58.8	58.2	57.9	57.5	56.8	56.6	56.0	-8.1%	-4.9
Florida	63.4	63.9	62.6	63.1	63.1	63.2	61.8	61.6	59.2	57.7	59.0	57.8	57.2	56.2	-11.3%	-7.1
Georgia	60.0	59.9	58.9	60.0	59.9	61.4	61.2	61.3	60.9	58.5	58.2	56.6	52.7	51.8	-13.6%	-8.2
Hawaii	68.6	71.1	71.8	71.2	71.2	70.8	70.9	71.0	69.4	68.8	68.8	68.0	67.4	65.8	-4.0%	-2.7
Idaho	39.4	44.1	42.0	43.4	43.3	42.3	39.1	41.9	39.8	39.3	40.8	36.2	37.7	40.5	2.7%	1.0
Illinois	53.7	52.9	52.7	52.6	53.8	53.9	53.6	53.5	52.8	51.5	51.7	51.5	50.3	50.8	-5.4%	-2.9
Indiana	77.6	78.0	77.4	77.0	77.5	77.4	78.0	77.3	76.5	74.9	74.4	73.0	71.9	71.6	-7.7%	-5.9
Iowa	66.1	67.2	65.9	66.3	64.5	63.2	62.5	61.6	59.9	56.0	55.4	54.2	52.8	51.1	-22.7%	-15.0
Kansas	64.9	63.7	65.3	64.9	63.6	65.7	64.8	64.4	63.8	62.6	61.8	62.3	60.2	59.2	-8.7%	-5.6
Kentucky	78.2	77.9	77.1	76.8	76.9	76.8	77.8	77.6	77.7	76.4	76.9	76.9	76.3	75.7	-3.2%	-2.5
Louisiana	52.6	52.1	52.2	53.3	53.2	53.7	54.6	54.6	55.3	53.9	54.0	54.3	53.1	52.0	-1.2%	-0.6
Maine	45.2	45.5	46.8	48.4	47.2	45.7	44.6	43.6	39.8	41.5	40.6	39.6	40.1	37.8	-16.4%	-7.4
Maryland	60.5	62.4	62.5	61.7	61.3	61.7	60.9	60.0	58.9	57.5	57.2	55.4	54.3	53.4	-11.8%	-7.1
Massachusetts	61.2	62.3	61.8	62.0	61.5	62.0	60.0	60.5	59.0	57.2	56.5	55.2	53.3	55.6	-9.2%	-5.7
Michigan	62.9	61.8	60.2	60.8	60.3	59.9	60.5	60.0	59.2	60.3	58.7	56.7	56.7	56.6	-10.1%	-6.4
Minnesota	58.8	58.9	59.1	60.5	59.4	58.5	57.9	57.0	55.8	54.1	52.9	53.0	51.7	52.1	-11.4%	-6.7
Mississippi	55.7	59.5	57.4	58.7	58.4	57.5	57.4	57.3	57.7	55.3	55.2	53.4	53.5	53.2	-4.5%	-2.5
Missouri	70.7	71.1	71.2	71.7	71.9	71.8	71.5	70.8	69.7	68.8	69.5	69.8	69.0	69.8	-1.3%	-0.9
Montana	59.7	65.3	60.4	63.4	63.4	62.3	60.7	62.1	61.3	60.3	61.9	56.7	57.7	59.4	-0.4%	-0.2
Nebraska	60.2	61.1	59.5	61.5	58.9	60.4	59.8	56.9	57.1	57.5	54.4	57.2	58.3	58.0	-3.7%	-2.2
Nevada	67.3	67.3	66.4	66.8	66.6	66.4	61.0	61.2	60.5	59.1	58.5	56.8	55.6	55.7	-17.2%	-11.6
New Hampshire	47.7	47.6	47.5	49.1	47.9	47.0	46.5	44.2	43.9	42.5	39.9	41.4	39.6	36.2	-24.2%	-11.5
New Jersey	54.7	54.2	53.8	55.1	56.1	55.7	54.4	54.3	54.3	50.7	51.0	50.7	49.1	49.0	-10.4%	-5.7
New Mexico	72.1	72.6	72.2	72.9	72.6	72.0	71.0	69.4	68.6	69.7	68.0	68.2	67.3	66.9	-7.1%	-5.1
New York	53.0	52.7	51.9	53.2	52.9	52.5	50.4	50.5	48.9	47.6	47.9	46.0	45.8	44.9	-15.3%	-8.1
North Carolina	60.0	60.1	59.6	58.1	59.3	59.8	59.4	60.4	58.6	55.9	56.7	54.6	53.0	51.7	-13.9%	-8.3
North Dakota	81.2	81.2	81.4	82.0	80.8	81.1	80.5	80.1	78.9	76.6	73.1	70.7	71.4	70.8	-12.8%	-10.4
Ohio	68.5	69.4	70.8	71.4	69.7	70.4	70.0	70.0	68.9	68.3	68.5	67.4	65.0	65.5	-4.4%	-3.0
Oklahoma	67.3	67.1	67.6	67.5	65.7	65.9	65.9	64.2	64.4	63.9	62.8	63.4	61.5	60.3	-10.4%	-7.0

Table 7. Carbon intensity by state (2000-2013) (cont.)

kilograms of energy-related carbon dioxide per million Btu

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
Oregon	38.0	41.3	38.3	39.3	39.0	40.1	37.1	39.8	38.6	37.7	38.6	33.2	33.4	35.6	-6.3%	-2.4
Pennsylvania	61.2	60.6	60.8	60.8	60.2	60.8	60.6	59.9	58.8	56.7	57.0	55.9	54.8	54.4	-11.2%	-6.9
Rhode Island	58.9	59.9	60.6	61.1	61.0	60.9	59.4	59.0	55.5	57.5	57.4	56.9	57.5	58.0	-1.5%	-0.9
South Carolina	48.2	48.9	47.4	48.2	49.4	48.2	48.9	48.4	48.2	45.9	46.4	44.9	43.1	41.0	-14.9%	-7.2
South Dakota	52.8	57.8	54.8	53.3	53.1	51.0	49.6	50.2	48.9	44.8	41.9	38.4	40.0	42.1	-20.3%	-10.7
Tennessee	61.7	60.2	60.0	59.5	58.9	59.2	61.3	60.8	59.8	54.9	56.1	55.2	54.6	51.9	-15.9%	-9.8
Texas	52.6	53.0	52.6	52.8	51.6	52.2	52.6	52.3	51.8	50.8	50.3	50.7	50.0	49.9	-5.1%	-2.7
Utah	75.6	76.3	76.5	75.8	76.6	76.2	75.1	74.7	74.2	73.5	72.9	71.9	71.5	72.0	-4.8%	-3.6
Vermont	37.2	39.2	38.3	38.1	40.4	39.0	35.4	37.0	33.2	31.9	32.3	32.0	26.5	26.4	-29.2%	-10.9
Virginia	59.5	60.6	60.3	60.3	59.0	58.6	58.0	58.3	56.7	54.2	54.9	53.7	51.5	52.5	-11.7%	-7.0
Washington	37.1	41.5	35.4	37.4	37.8	38.2	35.4	37.3	36.3	36.9	36.7	32.1	32.0	34.6	-6.9%	-2.6
West Virginia	84.5	83.8	84.3	84.7	84.4	84.2	84.0	84.4	83.7	81.0	82.1	81.7	80.7	79.9	-5.4%	-4.6
Wisconsin	62.3	61.9	62.1	61.3	62.2	61.9	60.4	60.0	59.8	58.5	58.3	58.5	55.9	58.5	-6.0%	-3.8
Wyoming	81.7	81.8	81.7	81.5	81.9	81.2	81.2	80.1	79.5	77.9	76.9	74.9	76.1	76.8	-6.0%	-4.9
Average all states	60.3	61.1	60.4	60.7	60.6	60.5	59.8	59.6	58.6	57.1	56.9	55.8	55.0	54.9	-9.0%	-5.4

Note: The District of Columbia is included in the data tables, but not in the analysis as it is not a state.

Source: U.S. Energy Information Administration, State Energy Data System and EIA calculations made for this analysis.

Table 8. Carbon intensity of the economy by state (2000–2013)

metric tons of energy-related carbon dioxide per million chained 2009 dollars of GDP

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
Alabama	947.5	881.6	889.4	873.7	839.2	825.8	827.1	833.3	791.5	704.6	759.5	734.5	691.6	661.8	-30.2%	-285.7
Alaska	1,220.0	1,145.3	1,118.1	1,127.8	1,158.5	1,161.3	1,038.3	949.7	847.3	758.4	793.2	770.3	735.6	730.8	-40.1%	-489.2
Arizona	424.8	426.9	412.3	398.1	413.9	384.2	374.2	370.3	381.9	379.0	381.6	367.5	352.5	364.7	-14.2%	-60.2
Arkansas	740.7	731.5	693.3	672.3	646.0	605.2	604.4	611.9	611.3	602.8	623.4	622.5	606.0	617.1	-16.7%	-123.6
California	231.0	234.4	227.9	212.0	213.3	203.5	200.6	199.2	189.5	190.7	185.0	175.9	174.1	171.8	-25.6%	-59.2
Colorado	386.4	416.3	405.2	398.6	404.0	395.7	392.4	393.8	380.0	368.6	373.6	355.3	343.7	338.8	-12.3%	-47.6
Connecticut	207.4	199.4	192.1	201.0	196.6	191.1	171.6	161.6	156.6	155.8	154.6	150.0	146.4	148.4	-28.4%	-59.0
Delaware	330.7	313.8	317.3	315.4	296.8	306.3	278.2	292.7	293.0	209.5	204.0	221.5	246.5	239.3	-27.6%	-91.4
District of Columbia	53.6	48.6	48.4	44.3	43.5	41.9	33.2	34.2	30.2	31.5	31.0	29.1	25.0	27.0	-49.7%	-26.7
Florida	388.4	375.9	366.1	357.0	353.3	335.4	321.1	315.8	305.0	305.0	328.7	312.6	298.7	290.5	-25.2%	-98.0
Georgia	451.3	425.7	436.0	435.0	436.3	445.3	431.1	428.9	405.1	394.9	415.5	372.9	321.0	311.2	-31.0%	-140.0
Hawaii	351.0	360.5	372.7	374.8	368.6	359.4	353.8	359.2	285.9	289.8	281.6	283.5	271.6	260.8	-25.7%	-90.2
Idaho	344.3	351.9	330.1	306.6	316.7	301.5	285.5	285.8	269.9	274.5	284.7	282.0	279.7	298.3	-13.4%	-46.0
Illinois	381.2	367.1	369.2	369.0	371.0	374.7	351.8	359.0	362.3	349.0	353.4	345.7	321.2	342.5	-10.1%	-38.7
Indiana	947.2	927.1	917.2	907.4	876.3	872.3	847.7	825.0	813.8	782.6	775.8	746.8	691.6	693.5	-26.8%	-253.7
Iowa	665.5	667.8	654.2	622.9	594.5	579.1	580.8	597.1	630.2	600.2	617.6	584.2	528.8	526.3	-20.9%	-139.1
Kansas	703.8	661.8	696.9	694.6	662.4	615.6	595.1	631.5	601.3	615.1	597.0	562.9	525.8	557.4	-20.8%	-146.4
Kentucky	1,008.8	1,026.5	1,002.2	954.5	973.1	959.3	952.6	960.5	941.6	915.9	917.3	889.4	817.3	805.2	-20.2%	-203.7
Louisiana	1,258.6	1,085.2	1,113.2	1,049.7	1,063.5	975.5	1,051.0	1,104.3	1,050.7	932.1	974.0	1,013.5	932.0	918.0	-27.1%	-340.6
Maine	483.6	478.1	497.4	478.1	468.6	450.4	406.9	401.9	366.0	358.4	346.9	339.4	306.1	318.6	-34.1%	-165.0
Maryland	318.3	307.8	296.7	298.7	289.0	284.8	257.4	254.0	238.5	227.7	217.6	199.9	184.6	181.6	-42.9%	-136.7
Massachusetts	236.8	233.9	235.0	232.9	223.3	224.0	198.9	201.9	193.0	181.0	178.3	164.9	146.8	157.1	-33.6%	-79.6
Michigan	460.3	463.2	448.8	433.5	440.3	438.8	418.8	429.1	434.1	443.1	424.4	402.8	379.8	391.1	-15.0%	-69.2
Minnesota	413.1	398.4	399.5	399.8	384.1	378.3	368.3	373.1	367.7	351.8	338.1	330.2	308.5	311.9	-24.5%	-101.2
Mississippi	737.3	849.1	751.9	741.0	741.0	708.4	711.2	718.3	673.1	651.1	692.0	642.6	640.4	629.2	-14.7%	-108.1
Missouri	537.7	564.4	562.9	577.6	569.9	572.9	561.0	554.5	534.3	519.8	527.3	533.4	499.0	509.9	-5.2%	-27.9
Montana	1,088.3	1,086.1	1,023.4	1,047.1	1,058.3	1,048.3	1,022.8	1,025.8	1,002.8	923.5	945.1	838.8	789.2	818.6	-24.8%	-269.6
Nebraska	577.2	586.3	569.4	549.5	537.2	529.9	521.6	517.2	534.0	538.3	546.3	552.2	528.3	538.6	-6.7%	-38.6
Nevada	459.8	442.9	397.0	398.5	393.9	379.4	305.0	301.9	308.1	326.6	312.1	279.2	285.4	299.2	-34.9%	-160.6
New Hampshire	325.9	313.8	315.5	359.1	364.2	343.7	307.7	303.2	299.9	275.9	259.4	251.4	222.1	215.2	-33.9%	-110.6
New Jersey	275.7	266.2	261.1	258.0	258.7	263.7	243.8	257.3	251.4	226.2	229.2	233.0	205.6	209.3	-24.1%	-66.3
New Mexico	837.4	829.2	766.9	771.7	740.0	743.8	739.4	726.1	700.7	711.7	661.2	689.9	661.3	651.2	-22.2%	-186.2
New York	210.8	200.0	194.5	204.0	200.1	188.6	167.0	170.3	167.6	149.9	144.9	135.1	128.3	128.4	-39.1%	-82.4
North Carolina	435.9	411.7	408.9	401.6	396.4	389.7	356.2	369.6	353.4	319.0	335.6	298.6	281.3	281.9	-35.3%	-154.1

Table 8. Carbon intensity of the economy by state (2000–2013) (cont.)

metric tons of energy-related carbon dioxide per million chained 2009 dollars of GDP

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change (2000-2013) percent	Change (2000-2013) Absolute
North Dakota	2,249.0	2,241.1	2,110.5	1,968.6	1,896.8	1,951.5	1,813.7	1,815.2	1,683.0	1,600.2	1,513.3	1,420.4	1,240.9	1,246.7	-44.6%	-1,002.3
Ohio	552.9	539.0	538.9	545.4	518.9	527.8	513.2	523.9	520.3	494.7	506.0	468.2	421.7	438.8	-20.6%	-114.1
Oklahoma	850.5	834.1	828.2	829.8	773.5	802.7	783.3	764.4	757.3	736.3	720.6	713.9	671.3	652.6	-23.3%	-197.8
Oregon	314.1	313.4	293.2	285.5	268.6	265.8	238.5	250.2	231.7	222.4	209.1	182.8	181.7	195.1	-37.9%	-119.0
Pennsylvania	536.1	501.6	508.4	505.2	500.8	499.9	481.0	479.2	463.1	428.5	438.1	420.7	400.3	407.5	-24.0%	-128.6
Rhode Island	271.0	277.7	255.5	240.6	219.9	223.3	204.7	219.8	217.2	231.3	221.6	223.0	211.1	199.9	-26.2%	-71.1
South Carolina	556.9	541.5	539.2	524.3	567.7	543.6	534.4	521.3	509.2	496.5	506.7	470.2	430.1	404.8	-27.3%	-152.1
South Dakota	520.3	482.0	445.7	429.9	418.2	398.3	398.2	394.8	406.0	394.7	394.2	363.7	376.4	383.0	-26.4%	-137.3
Tennessee	570.9	561.8	540.7	517.1	503.2	503.1	500.9	501.8	471.2	407.4	430.2	405.6	368.1	356.6	-37.5%	-214.4
Texas	690.4	667.4	665.8	654.7	617.2	583.2	560.6	533.4	507.3	482.7	496.7	494.7	463.1	459.4	-33.5%	-231.1
Utah	745.0	702.4	683.6	676.8	671.5	650.4	612.5	593.8	594.7	564.1	546.6	536.4	510.2	534.1	-28.3%	-210.9
Vermont	304.0	289.4	269.4	268.2	275.2	262.2	254.4	247.8	223.9	238.1	217.9	209.4	195.8	207.5	-31.7%	-96.5
Virginia	364.5	347.5	341.3	340.2	337.4	324.9	300.4	309.8	281.8	253.2	253.7	231.1	224.8	241.0	-33.9%	-123.6
Washington	278.0	273.3	245.8	248.1	250.1	240.1	225.6	227.5	216.0	214.9	207.3	191.0	186.6	193.0	-30.6%	-85.0
West Virginia	1,985.2	1,816.8	2,016.4	1,950.0	1,865.9	1,852.9	1,827.3	1,866.7	1,753.8	1,413.9	1,536.9	1,463.6	1,425.7	1,441.1	-27.4%	-544.0
Wisconsin	480.6	467.8	462.2	439.8	436.1	440.3	402.6	407.0	412.4	386.5	385.1	374.2	342.7	374.1	-22.2%	-106.5
Wyoming	2,541.4	2,414.5	2,329.0	2,333.7	2,243.7	2,126.9	1,924.5	1,888.8	1,750.1	1,679.0	1,742.7	1,708.4	1,862.0	1,914.6	-24.7%	-626.7
Average all states	464.8	451.6	446.2	437.6	428.7	417.0	400.5	399.0	386.5	368.3	371.6	356.8	334.7	336.0	-27.7%	-128.8

Note: The District of Columbia is included in the data tables, but not in the analysis as it is not a state.
Source: U.S. Energy Information Administration, State Energy Data System and EIA calculations made for this analysis.

Table 9. Net electricity trade index and primary electricity source for states with least and most energy-related carbon dioxide emissions per capita (2000-2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Primary Source
Least CO2 per capita															
New York	0.9	1.0	0.9	0.9	0.9	0.9	1.0	1.0	1.0	0.9	0.9	1.0	1.0	1.0	Natural Gas
Vermont	1.6	1.4	1.3	1.3	1.2	1.2	1.5	1.3	1.5	1.7	1.5	1.6	3.0	3.2	Nuclear
California	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	Natural Gas
Connecticut	1.0	0.9	0.9	0.8	0.9	0.9	1.0	0.9	1.0	1.0	1.1	1.1	1.1	1.1	Nuclear
Oregon	0.9	0.9	1.0	1.0	1.1	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	Hydroelectric
Idaho	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.7	0.6	0.6	Hydroelectric
Massachusetts	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.8	0.7	0.6	0.6	Natural Gas
Washington	1.0	0.9	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.1	Hydroelectric
Rhode Island	0.9	1.0	0.9	0.7	0.6	0.7	0.7	0.9	0.9	1.0	1.0	1.1	1.0	0.8	Natural Gas
Maryland	0.8	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	Coal
Most CO2 per capita															
Nebraska	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.0	1.1	1.1	1.1	1.0	1.1	Coal
Oklahoma	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.2	1.1	Natural Gas
Indiana	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.0	1.0	1.0	1.0	0.9	Coal
Montana	1.6	1.9	1.8	1.8	1.8	1.9	1.8	1.7	1.7	1.7	2.0	2.0	1.8	1.8	Coal
Kentucky	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	Coal
Louisiana	1.0	1.1	1.1	1.1	1.1	1.1	1.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9	Natural Gas
West Virginia	3.0	2.7	3.0	3.0	2.8	2.8	2.6	2.5	2.4	2.2	2.3	2.3	2.2	2.2	Coal
Alaska	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	Natural Gas
North Dakota	2.9	2.7	2.6	2.5	2.4	2.7	2.4	2.5	2.4	2.5	2.5	2.4	2.3	2.1	Coal
Wyoming	3.3	3.1	3.1	3.0	2.9	2.9	2.7	2.6	2.4	2.5	2.5	2.4	2.6	2.7	Coal

Greater than 1.0 indicates a net exporter of electricity.
Less than 1.0 indicates a net importer of electricity.
Exactly 1.0 indicates self-sufficient.
Source: U.S. Energy Information Administration, State Electricity Profiles, Supply and Disposition of Electricity, 1990 through 2013
http://www.eia.gov/electricity/state/
Note: The District of Columbia is included in the data tables, but not in the analysis as it is not a state.

Appendix A. Comparison of fuel detail for the State Energy Data System and the annual series appearing in the Monthly Energy Review data system

Consumption Sector	Energy Source Category	State Energy Data System Fuel Detail	Monthly Energy Review Fuel Detail
Residential	Coal	Coal	Coal
Residential	Natural Gas	Natural Gas	Natural Gas
Residential	Petroleum	Distillate Fuel	Distillate Fuel
Residential	Petroleum	Kerosene	Kerosene
Residential	Petroleum	LPG	LPG
Commercial	Coal	Coal	Coal
Commercial	Natural Gas	Natural Gas	Natural Gas
Commercial	Petroleum	Distillate Fuel	Distillate Fuel
Commercial	Petroleum	Kerosene	Kerosene
Commercial	Petroleum	LPG	LPG
Commercial	Petroleum	Motor Gasoline	Motor Gasoline
Commercial	Petroleum	Residual Fuel	Residual Fuel
Commercial	Petroleum	Not Available	Pet Coke
Industrial	Coal	Total Coal	Total Coal
Industrial	Coal/Coke	Not Available	Coking coal
Industrial	Coal	Not Available	Other Coal
Industrial	Coal/Coke	Not Available	Net Coke Imports
Industrial	Natural Gas	Natural Gas	Natural Gas
Industrial	Petroleum	Asphalt and Road Oil	Asphalt and Road Oil
Industrial	Petroleum	Distillate Fuel	Distillate Fuel
Industrial	Petroleum	Kerosene	Kerosene
Industrial	Petroleum	Total LPG (HGL)	Total LPG (HGL)
Industrial	Petroleum	Not Available	Normal Butane/Butylene
Industrial	Petroleum	Not Available	Ethane/Ethylene
Industrial	Petroleum	Not Available	Isobutane/Isobutylene
Industrial	Petroleum	Not Available	Propane/Propylene
Industrial	Petroleum	Not Available	Butane/Propane Mix
Industrial	Petroleum	Not Available	Ethane/Propane Mix
Industrial	Petroleum	Lubricants	Lubricants
Industrial	Petroleum	Motor Gasoline	Motor Gasoline
Industrial	Petroleum	Residual Fuel	Residual Fuel
Industrial	Petroleum	Petroleum Products (Other)	Detail as follows:

Consumption Sector	Energy Source Category	State Energy Data System Fuel Detail	Annual/Monthly Energy Review Fuel Detail
Industrial	Petroleum	Not Available	Petroleum Coke
Industrial	Petroleum	Not Available	Aviation Gas Blending Components
Industrial	Petroleum	Not Available	Motor Gasoline Blending Components
Industrial	Petroleum	Not Available	Pentanes Plus
Industrial	Petroleum	Not Available	Petrochemical Feedstocks
Industrial	Petroleum	Not Available	Special Naphthas
Industrial	Petroleum	Not Available	Still Gas
Industrial	Petroleum	Not Available	Unfinished Oils
Industrial	Petroleum	Not Available	Waxes

Appendix B. Other state-related links

The underlying energy data upon which the state-level CO2 calculations are based: http://www.eia.gov/state/seds/. This is the State Energy Data System (SEDS), the main repository for all of EIA's state-based energy data.

The state CO2 data that this analysis is based upon: http://www.eia.gov/environment/emissions/state/

This data set contains CO2 emissions data for each state by sector and fuel based on SEDS.

State Energy Profiles: http://www.eia.gov/state/
These profiles contain additional narrative and rankings to put the state energy data in context.

State Electricity Profiles: http://www.eia.gov/electricity/state/
These profiles contain data and analysis focused on electricity.

Two fuel-specific profiles:
State Renewable Energy Profiles: http://www.eia.gov/renewable/state/
State nuclear profiles: http://www.eia.gov/nuclear/state/

United States energy map: http://www.eia.gov/state/maps.cfm?src=home-f3
This is an interactive map of major energy facilities in the United States.

State emissions for the electric power industry for SO2 and NOX as well as CO2. The electric power industry includes electricity generated in the electric power, industrial, and commercial sectors.
http://www.eia.gov/electricity/data/state/
Go to the above url and download the spreadsheet given below:
U. S. electric power industry estimated emissions by state, back to 1990 (EIA-767 and EIA-906)